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# THE NEXT FOUR YEARS: The CAUT Lobbying Conference

With a new government in Ottawa the focus of attention for would be lobbyists is its plans for the next four years. This was the focus of attention for would be lobbyists is its plans for the next four years. This was the theme for the 1989 CAUT lobbying conference held in Ottawa. The conference opened with an address by the Minister of State (Science and Technology) the Honourable William Winegard in the main parliament building, the Centre Block. A former university president Dr. Winegard laid out some of the



ARTHUR MAY

difficulties which the government faced in the next four years. He emphasised the battle between balancing the budget and the various expenditure demands. He also pointed out that the government was intent on developing an official the state of the sta effective policy for science in Canada.

The substantive theme of research ran

through much of the conference not only in addresses of the speakers but also in a simula-tion that was run as a major part of the confer-

An initial briefing that the conference received was from Don Savage on some of the complexities of the government in Ottawa. One of the defences that the federal government deploys is the very complexity of gov-ernment so that a lot of hard work is required ernment so that a lot of hard work is required just to find our who are the appropriate people to talk to. This complexity can slow events but it can also camouflage activity. The flow chart of policy development and legislation convinced everybody that understanding Ottawa was no simple task. A little bit of practical advice was to obtain a government before body. This all text servide the cocker.

practical advice was to obtain a government phone book. This at least provides the codes for access to the decision makers. Mme Paule Leduc, the President of SSHRCC, addressed the conference on the topic of the outlook for the humanities and iopic of the outlook for the humanities and social sciences. Pointing out that research policy is often short term she pointed the contrast with the long term vision that is provided by the humanities. She elaborated that one of the tasks ahead was to integrate research into the wider debate on research policy. There are many aspects of government policy that are changing the way research is done and there should be an investigation of the effects of this. One notable point was that the nolicies. should be an investigation of the effects of this. One notable point was that the policies of government themselves have increased the rate of change in research. In her speech Mme, Leduc pointed out that the council was collaborating with NSERC in joint master level fellowships and that there maybe a joint programme in technological management. The financing of the Council was outlined and the point made that there had been a 17% increase in demands for funds while the pool of funds to be provided had stayed the same. Since this was a message that we were to hear again, it bears emphasising. Mme. Leduc concluded her contribution by pointing out that more money was needed for fundamental research. That too was a strain that has been often heard among academics.

An international comparison was provided by Jerry Morris who is the Director of Legislation for the American Federation of by Jerry Morris who is the Director of Teachers. The scale of that organization's efforts in lobbying is perhaps caught by the fact that it has a Director concerned essentially with tracking and effecting the legislature process in Washington. The topic of his address to the conference was on alliance building in Washington. He made a very convincing case that the scale of affairs in Washington is such that only by sharing skills and information is one able to have an effective voice. Reflecting on a fact of U.S. pollitical life he commented that representatives and senators would rather be elected than be right. This provided the lobbyists with an opportunity to affect political action committees. These are a feature of Washington that do not have direct equivalents in Otrawa.

It had been essential for those engaged in higher education to form an alliance in order to fight some of the worst effects of the Reagan years. They had also had a sure-add been become.

Reagan years. I ney had in some way use successful because some of the cuts to funding had been restored. They had also had a successful effort in the area of mandatory retirement. A considerable part of that success Dr. Morris attributed to a very large field operation. tion. For example, representatives visiting their districts are often met by informed individuals, asking about legislation and urging the politician to vote a particular way. If the listeners had been persuaded earlier that Ottawa is a maze then they were convinced that Washington is a labyrinth. One of the effective ways to get around both is to build alliances



PAT FILE

One of the active political fields at the one of the active pointeal fields at the moment is that concerned with the status of women. Pat File, a lawyer and lobbying consultant on these matters outlined what was to come in the next four years. Although there had been no new initiatives in this area since the government was elected in November, she

suggested that there will be two main thrusts: suggested that there will be two main thrusts: integration of work and family responsibilities and full employment equity for women. The former includes issues such as childcare, maternity and parental leaves; the latter will rely heavily on the federal contractors programme and the importance of pay equit vand benefits for part-time workers.

She too spoke of the need for combined action in order to have an effect. There was a new force of the red to the combined of the part of the combined of the part o

She too spoke of the need for combined action in order to have an effect. There was a lot of work to be done in providing briefs and commentaries on legislation and policies. However, the most important effect that we could have would be to ensure that the universities instituted effective policies of employment equity. And that the universities themselves had policies on matters such as sexual harassment, which are important to women.

sexual harassment, which are important to women.

There was a panel on Native Post Secondary Education in Canada in which Mr. Harvey McCue, the Director of Education Policy and Planning Directorate, Indian and Northern Affairs and Mr. Russell Diabo, a representative of the Assembly of First Nations and a graduate student, spoke to the current issues. There was a noticeable contast in the outlooks of the two speakers. Mr. McCue took the view that many good things had been accomplished, in particular the increased participation in post secondary education. Mr. Diabo, on the other hand, pointed out that many rights had not been respected in the provision of services to native Canadians. The capping of financial support by the government was obviously a matter of difference between the two speakers and a stimulus for questions from the floor since this is an active area of CAUT lobbying.

The final external speaker at the conference was Dr. Art May, the President of NSERC. He gave up his Sunday morning to

talk on the outlook for science and research. He pointed out that the luck of Canadians in having an abundance of natural resources was having an abundance of natural resources was beginning to wane since there were now many other sources of the things that we could produce. And even where there was a demand for our products we still tended to export the low value items. fish rather that fish processing machinery. Arguing that 'Economic strength today is strength in ideas' he emphasised the need to carry out all sorts of research but especially fundamental work. Noting that the median are of researchers in government the median age of researchers in government and university laboratories was now fifty, he emphasised the need for support for university research in order to renew the population of

emphasised the need for support for university research in order to renew the population of workers.

Dr. May too spoke of too little money being sought by too many competent researchers. A problem that was exacerbated by the inflation factor in research expenditures which has been running at a higher level than the general level of inflation.

In between the various speakers, those attending took part in a lobbying simulation in which they had to prepare positions, meet ministers, appear on hor-line shows and write press releases. With all that to do they sent in the total to early the day but had to take their meals as working lunches so they could complete the task. The most eager participants were those old hands who were allowed to play the role of minister. Some of them became real tigers - which may have been partly explained by the fact that they didn't have to get elected. The deputy ministers in the simulation, were drawn from the professional staff of associations across the country. They were the real killers. Perhaps the opportunity to control faculty, and evaluate them, was too good an opportunity to be missed. If the cut and thrust of debate is informative then betalled of the professional staff of designations are real times.

## THE NEXT FOUR WEEKS

In the next four weeks the government of Canada will set the tone for the first part of this Mulroney ministry in the delivery of the speech to the throne and the presentation of the budget. CAUT, through the President, recently addressed this topic in a letter to the Prime Minister's office.

Dr. King called upon the government to deal with 'the financing of research and of the universities in a way that will encourage both university researchers and the general public to perceive a real commitment by the federal government in these areas both in terms of rhetoric and finance.'

Again, the government was asked to

rhetoric and finance.

Again, the government was asked to implement the recommendations of the Lortic report: the doubling of the base budgets of the research councils over three years and then indexing them at one and a half times the rate of growth of GNP. This was linked to the need to increase funds for research in the area of environmental sciences.

or environmental sciences.

On the 'topic of research funding the government was urged to pay attention to both the requirement for research into critical social issues and the development of an effective cultural policy, which must include support for humanities research and the Canada Council

The question of transfer funds was also raised. There have been rumours circulating in Ottawa that the federal government is going

to introduce unilateral cuts in the transfer payments for post secondary education. This would not be at all out of character since both would not be at all out of character since both the Trudeau government and the last Mulroney government singled out transfers for post secondary education in cutting back federal government expenditure. Dr. King pointed out that these funds are designed to pointed out that these funds are designed to provide the university infrastructure without which there cannot be either effective univer-sity research or good teaching. He pointed out that such a unilateral cut would damage the federal/provincial relationships that the Prime Minister has done so much to improve in his last government

in his last government.

Addressing a third area of federal responsibility, student aid, Dr. King encouraged the development of more effective policies in this area by pursuing the ideas developed by Mr. Crombie and Mr. Bouchard when they were Secretary of State.

Crombie and Mr. Bouchard when they were Secretary of State.

It is evident that this government's intentions on post security of the President argued two points: that it would only be with a vigorous research funding policy that the government would prevent Canada from "slipping quietly out of the group of countries called the developed world." And that if Canada is to compete effectively with the U.S.A. then we would have to have effective universities and research.

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Dilfusion totale moyenne. 27 000, Le Bulletin de L'ACPU parai 10 fois au cours de Tamée universitaire. Le 1 erd chaque mois de septembre à Juin. Délat de réception des anonces: 13 jours ouvables au moirs evant la déte de publication. Il ne set a pas accepté d'annutations après la date limite. Pour toute oftre d'emploi, un délat minimum e 30 jours aue surgé entre la date de parution du journal et la date innife pour posturé le poste.

L'éditaur n'accepre pas d'annonces de postas d'administration et d'enseignement qui restregente les candidatures pour dos raisons de race, d'origine raciale, dre religion, de culeur, de seue, d'âge, d'état civil, de situation l'amiliate, athniques, d'hardicas, d'ôrientation seue d'annonce portiques générales. L'ACPU samend à ce que fous les postes a mondés dans le portiques générales. L'ACPU samend à que fous les postes a mondés dans le l'amine a libration à l'établissement qui la l'injention de l'aire parcitre une annonce estrictive de fourrit à le rédactrica du Bullatin une déclaration énoncant cos nisons.

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# Nouvelles en brèves du Québec

par Susan Gray

The Thursday Report (Université Concordia)

Après trois ans de travail, quatre professeurs en informatique, Clement Lam, John McKay, Larry Theil et Stanley Swierez, out résous un problème qui a représenté un grand défi pour les mathématiens/nes depuis le 18e siècle: trouver si le "plan projectiv fini d'ordre 10" peut exister. La réponse est non.

L'équipe concordienne a dû programmer un superordinateur pour chercher la solution à travers 1 000 000 000 000 000 combinaisons, en faisant preuve

d'ingéniosité: miser sur l'organisation et la programmation de l'ordinatuer plutôt que sur la formulation des équations elles-mêmes. Les compétences acquises au cours de cette recherche auraient des implications

pour le développement des réseaux de communications et de la cryptographie. Selon le New York Times, des experts disent qu'aucun être humain ne pourrait

comprendre tous les détails de la solution. Toujour seton le <u>Times,</u> il y a des mathématiens/nes qui doutent de la validité d'unc preuve qui dépasse la compréhension humaine. Cependant, il y en a d'autres qui disent que si un autre ordinateur, suivant la même méthode, arrivait au même

résultat, cella équivaudrait à une expérience en laboratoire. L'équipe de Concordia a employé un superordinateur américain - un CRAY. Un nouveau programme de premier cycle en génie minier sera offert conjointement par l'université McGill et l'Ecole Ploytechnique.

Le secteur minier est très important au Québec car il est responsable de 24%

des exportations de cette province.
Tris universités québécoises offrent un programme en génier minier, mais ce
qui distinguera le nouveau programme des autres sera sa spécialisation dans

De plus, il sera bilingue, ce qui constitue un précédent. Roland Doré, directeur de l'Ecole Polytechnique, explique: "On est convaincu que nos étudiants seront confrontés tôt ou tard à la nécessité de la connaissance de l'anglais dans l'industrie Les cours à la Polytechnique seront donnés en français, tandis que les étudiants/es auront le choix de la langue pour les travaux des cours qui ont lieu à

Le logiciel Safework, né d'une initiative de diplomés de Polytechnique, connaît un grand succès dans le milieu d'ergonomie. Robert Gilbert, président de Génicom, la société gestionnaire de Safework, et professeur à l'Ecole Polytechnique, revient de France où il a présenté le logiciel au ministère français de la Défense nationale,

à la Société Aéro de Paris et à d'autres organismes. Même si Safework n'est pas tout à fait au point (il devrait l'être d'ici un an ou un an et demi), ses performances sont tellement étonnantes que la société californienne MacDonald Douglass veut avoir l'exclusivité de la distribution du logiciel dans le domaine aérospatial. A part Génicom, les compagnies General Motors, Général electrique du Canada, Kraft et Squibb ont investi des ressources humaines dans le développement du logiciel; on peut chiffrer leur participation à deux ou trois centaines de milliers de dollars.

Le logiciel Safework, qui possède plusieurs particularités uniques, dispose de plus d'une centaine de modèles géométriques et biomécaniques pour des animations en 3D. Ceux-ci permettent un grand choix dans la conception de postes

Les clients consultent Génicom pour deux raisons. La première: pour régler des problèmes précis qui se présentent; par exemple, lorsque les postes de travail ne sont pas assez fonctionnels ou ne satisfont pas aux normes de la Commission de la santé et sécurité du travail. La deuxième: la prévention de ces mêmes problèmes dès la conception.

Un huitième partenaire, le Centre de recherche informatique de Montréal, vient de se joindre à Castorplus, un important projet consistant en la mise au point d'un système de conception par ordinateur consacré aux aménagements hydrauliques. Le projet est dirigé par un groupe de chercheurs du Département de génie civil de l'Ecole Polytechnique.

Ce système, destiné d'abord à des ingénieurs/es, est aussi approprié pour le travail des gestionnaires, des aménagistes et des écologistes. Avec Castorplus, on peut traiter de problèmes très grands comme l'assainissement des eaux, la construction des barrages, etc.

The Reporter (Université McGill)

Récemment (en janvier dernier), l'université McGill est devenue la première université canadienne à offrir un programme de 3e cycle en Sciences de réadaptation. L'université continue une longue tradition dans ce domaine car elle a été la première à offrir un baccalauréat en Physiothérapie et ergothérapie ainsi qu'un maîtrise en Sciences de la santé (réadaptation).

Christina Hui-Chan, la directrice de l'Ecole de physiothérapie et ergothérapie, a dit qu'il avait fallu 10 ans d'efforts pour créer la "masse critique" nécessaire à une base scolastique qui est essentielle pour le programme de 3e cycle.

L'université McGill dispose de plus d'étudiants/es de deuxième cycle aptes à suivre le nouveau programme que n'importe quelle autre institution universitaire

Tout/e candidat/e désirant obtenir un doctorat doit proposer un projet de recherche original. Comme on n'a pas encore engagé de professeurs/es, les quatre Etudiants/es admis/es au programme travailleront indépendamment pour

Au fil des événements (Université Laval)

L'université Laval vient de mettre sur pied le Comité sur le placement étudiant, présidé par le doyen de la Faculté des sciences de l'agriculture et de l'alimentation, Marc J. Trudel, et y a nommé un coordinateur à temps complet, Jean Paul Albert.

Le Comité a annoncé son plan d'action le 24 janvier dernier, un plan comprenant 48 recommandations qui supportent deux objectifs: le premier est d'assurer une insertion socio-professionelle des étudiants/es; le deuxième est d'aider l'étudiant/e à être plus responsable face à son insertion sur le marché du travail. Pour que tous les intervenants en matière de placement atteignent leurs buts, il faudra une collaboration étroite entre les struzctures déjà en place et le nouveau Comité.

### TO THE EDITOR

In the debate provoked by the racial theorizing of University of Western Ontario Psychology professor Philippe Rushton, many have asked how matters could have been allowed to reach the present point, with tenure- and award-granting subject to peer review the way they are. Bureaucratic tolerance for ingroup "backscratching" has indeed permitted results to develop which can erupt into scandal in a case like this.

Fortunately, the tolerance is not uniform. I know of no Canadian university History Department where proponents of the "no holocaust" theory of World War II, whatever their other qualifications, could even teach part-time. Are not Blacks entitled to similar protection against baseless "academic" slanders?

Yours sincerely.

Yours sincerely,

Dan Goldstick

Department of Philosophy University of Toronto

### CAUT voting on Memorial censure

As we go to press, the Council of CAUT is engaged in a mail ballot on the question of lifting its censure of the President and Board of Regents of Memorial University. The details of an agreement have been worked out between CAUT, Memorial University and the Memorial faculty association (MUNFA) in the course of reaching the first collective. of reaching the first collective agreement between the university and its academic staff. Should

Council agree to the terms of the

Council agree to the terms of the agreement, censure will be lifted.

The censure of Memorial has been in place for nearly ten years and arose from the failure of the university to renew the contract of professor Marlene Webber, a faculty remember in the school of corial work.

member in the school of social work.

Another long standing censure that CAUT had in place, that of the University of Calgary, was lifted late

#### CENSURED ADMINISTRATION

Censure means that CAUT has concluded that a university administration has Censure means that CAUT has concluded that a university administration has breached one or several of the fundamental principles of academic freedom and governance which CAUT believes to be indispensable to the proper functioning of a university. It also means that the university administration has resisted all reasonable suggestions from CAUT for a resolution of the dispute. Censure is a notice to all members of CAUT that they should inform themselves, in their dealings with a censured administration, of the issues involved in the censure. In particular, CAUT members are asked not to accept appointments at a censured university; not to accept invitations to speak or attend academic conferences at a censured university; and not to accept any distinction or honour that might be offered by a censured. speas or attend academic coinciences at a censured university; and not to accept any distinction or honour that might be offered by a censured administration. Faculty members employed at a university whose administration is under censure are asked to support and assist efforts to convince the administration of the necessity for a settlement of the dispute. Advertisements for positions vacant in universities under censure are not carried in the CAUT Bulletin.

CAUT recognizes of course, that consume imposes a burden on members.

CAUT recognizes, of course, that censure imposes a burden on members of the academic staff and students at censured universities. It is the view of the association, however, that censure, and the sanctions associated with it, is necessary both to publicize the unsatisfactory conditions which exist in the censured university and to persuade the censured administration that it should adhere to standards now widely accepted in the Canadian academic

The following administration is under CAUT censure: President and Board of Regents, Memorial University of Newfoundland

Censure was imposed when the appointment of a member of the School of Social Work was not renewed under circumstances which suggest that her political views were unacceptable to the University administration and when the administration and Board of Regents were unwilling to agree to a fair procedure to determine whether the faculty member had been fairly treated.

Full information on the above censure is available on request.

# President's message/Le mot du président

niversity research in this country continues to be an item of major concern to CAUT. Despite a great deal of effort on our part and a greater amount of rhetoric on the part of government, it appears that there are more questions than answers.

In his address to delegates at the recent CAUT Lobbying Conference, Aurthur May, the President of NSERC, left us with three sobering thoughts:

•the number of good University research projects which NSERC is unable to support through lack of funds is increasing steadily;

•fully 11% of renewal applications will not be funded this year, thus narrowing the base of active researchers in the areas funded by NSERC still

•the recommendations of the Lortie Commission (to double the base budgets of the Granting Councils over three years and thereafter to index them at 1.5 times the growth rate in GNP) would prevent Canada from "slipping

quietly out of the group of countries called the developed world"

Sobering thoughts. And there are others. The base budget of NSERC was increased by only 2.3% this year roughly half the inflation rate. Again, underfunding the operating budgets of the Universities and the consequent cutbacks in available monies for the infrastructure supporting research has made some Universities question whether they can afford to accept certain research awards.

In these anxious days before the new Throne Speech and Michael Wilson's anticipated budget, it is interesting to recall the Prime Minister's 1984 commitment to double Canada's R and D spending to 2.5% of GNP and sobering to observe how far off the mark we in the Universities have fallen. Is the expertise of Canadian university researchers to perform the fundamental research so desperately needed by this country to become a wasted resource?

On the matter of targeted research,

CAUT's position is clear - and utterly defensible. Applied research - contract work even - may well have a place in universities, but not when it displaces the basic, fundamental research which is our principal research mission. If we in the university do not fulfill this role, who

Paule Leduc, President of SSHRCC, also spoke at the Lobbying Conference. It is clear that there are a number of concerns in regard to SSHRCC in addition to the chronic underfunding which continues to plague it. Responses to the first draft of the latest in a seemingly never ending series of reviews of SSHRCC, the Courtney Report, are in and, according to Paule Leduc, Courtney Report 2 will be out in April. CAUT's response to Courtney has been sent to all member associations and summarized in the Bulletin. My major concern is that repeated reviews of the operation of SSHRCC will in themselves do little to assist those researching the social sciences and humanities. We should put a hold on navel gazing and attack the real problem. The country needs research on the environment and, for example, the economic and social effects of environmental legislation. We need research on critical social issues such as the cultures and societies of this country's trading partners, the role of women in our society and native issues. And we surely need a vigorous cultural policy encouraging the study in Canadian universities of the humanities.

It is frustrating to realise how much university research could contribute to these, and how stifled we will become if funds are not available. CAUT must continue to adopt the most vigorous lobbying stance it can. Encouragingly, we have been offered the support of the Councils themselves in the form of various useful data. But we, the researchers, must continue to accept the responsibility of lobbying government for adequate funding of Canadian university research.

Peter King

la plus dynamique qu'elle peut. Fait encourageant, les conseils eux-mêmes nous ont accordé leur appui en nous fournissant plusieurs données qui s'avèrent des plus utiles. Mais en tant que chercheurs, nous devons continuer d'exercer des pressions auprès du gouvernement afin qu'au Canada, la recherche universitaire soit financée adéquatement.

a recherche effectuée dans les universités canadiennes demeure coeur encore préoccupations de l'ACPU. Toutefois, bien que nous ne ménagions pas nos efforts et que le gouvernement y emploie toute sa rhétorique, il semble toujours y avoir plus de questions que de réponses.

Dans son allocution à l'intention des participants à la récente conférence sur le lobbying, Arthur May, le président du Conseil national de recherches du Canada (CNRC), a soulevé trois points qui portent à réfléchir :

·le nombre de projets de recherche universitaire valables que le CNRC ne peut subventionner faute de fonds augmente constamment;

·cette année, on devra refuser au moins 11 p. 100 des demandes de renouvellement, ce qui réduira encore davantage la base des chercheurs actifs dans les domaines subventionnés par le CNRC;

recommandations de la Commission Lortie (le rapport Lortie recommandait de doubler les fonds initiaux accordés aux conseils subventionnaires pour ensuite les indexer à l'équivalent de 1,5 fois le taux annuel de croissance du PNB) empêcheraient le Canada de glisser tranquillement hors du groupe des pays qu'on appelle industrialisés .

Voilà qui donne matière à réflexion. Et on pourrait facilement allonger la liste, quand on pense que cette année, les fonds initiaux du CNRC n'ont été augmentés que de 2,3 p. 100 - à peine la moitié du taux d'inflation. Une fois de plus, le sous-financement des budgets de fonctionnement et les réductions subséquentes des sommes disponibles pour l'infrastructure de recherche ont incité les universités à se demander si elles peuvent se permettre d'accepter certaines bourses de recherche.

En ces jours d'inquiétude qui précèdent le Discours du Trône et le dépôt du budget de Michael Wilson, il est bon de se rappeler l'engagement du Premier ministre qui, en 1984, disait vouloir doubler les sommes destinées à la R-D pour les porter à 2,5 p. 100 du PNB. Il est également intéressant d'observer combien les universités ont dévié de leur chemin. Les compétences si utiles des chercheurs universitaires qui travaillent dans le domaine de la recherche de base deviendront-elles une ressource gaspillée?

En ce qui concerne la recherche orientée, la position de l'ACPU est on ne peut plus claire - et tout à fait justifiable. La recherche appliquée - et même le travail à contrat - a peut-être bien sa place dans les universités, mais pas si elles viennent supplanter la recherche de base ou fondamentale, qui constitue en fait notre vocation première à cet égard. Après tout, si les universités n'effectuent pas cette recherche, qui le fera?

Paule Leduc, présidente du Conseil de recherches en sciences humaines du Canada (CRSH), a également pris la parole au cours de la conférence. Outre le sous-financement chronique avec lequel doit constamment composer le CRSH, on a soulevé un certain nombre de questions sur le Conseil. On reçoit actuellement des réactions à la première ébauche du Rapport Courtney, la demière étude d'une série apparemment sans fin sur le CRSH. Paule Leduc prévoit que le deuxième rapport Courtney sera publié au mois d'avril prochain. L'ACPU a fait parvenir à tous ses membres sa réponse au rapport, réponse dont on a d'ailleurs publié les grandes lignes dans le Bulletin. Je crains par-dessus tout que ces études

répétées des activités du CRSH n'aident pas vraiment les chercheurs qui travaillent dans le domaine des sciences humaines. Nous devrions arrêter de nous regarder le nombril et nous attaquer au vrai problème. Le pays a besoin de la recherche sur l'environnement, entre autres de la recherche sur les effets économiques et sociaux de la législation régissant l'environnement. La recherche sur des questions sociales de grande importance, comme les cultures et la population des partenaires commerciaux du Canada, le rôle des femmes dans notre société et les questions relatives aux autochtones, est essentielle. Et on a certainement besoin d'une politique culturelle solide qui vienne encourager l'étude des sciences humaines dans les universités canadiennes.

Il est très frustrant de constater combien la recherche universitaire pourrait contribuer à tous ces éléments, et combien nous serons étouffés par un manque de fonds disponibles. Lorsqu'elle effectue son lobbying, l'ACPU doit toujours adopter la position

# On the use and misuse of grant size

The following paragraph is an excerpt from a memorandum which the President of NSERC, Dr. Arthur May, sent to university presidents in March, 1988. It was labelled se or misuse of operating grant size":

Over the last year, I have become increasingly concerned by the extend to which the operating grant level is used as the absolute "measure of the researcher" especially in tenure, advancement, salary decisions etc; this worries me. Such university decisions are normally made in a much broader context that the terms of reference given to an NSERC discipline grant selection committee. Furthermore, correlations of funding with quality are too frequently made by individuals who are not fully aware of the extent to which the cost of research is a major criterion for operating grants; therefore, researchers of comparable activity and productivity in a given discipline often have different grand sizes. Comparisons amongst disciplines are even more dangerous to make. With the sizes. Comparisons amongst disciplines are even more dangerous to make, will the current budgetary pressures forcing our peer committees to be very selective and with Council's desire to provide opportunities to do high cost research, I urge caution in any attempt to assess stature on the basis of research grant size.

# Academic Freedom, Tenure and Unpopular views

by Peter R. King President Canadian Association of University Teachers

Canadian faculty members will welcome the way in which many voices have spoken in recent weeks to defend academic freedom. At the same time several commentators, the Globe and Mail among them, seem to have misunderstood the nature of academic freedom, the reasons for its existence and protection at the universities, and the attendant responsibilities, which I believe universities have to their students and the community.

First of all, university professors undoubtedly have the same rights as private citizens to express political, social or economic views, to the media or in any other public forum. This should be true however unpalatable such views may be. There has been a long battle in this country to secure this right. There was a time when the President of the University of Toronto, for instance, held that university professors should be treated as civil servants, free with respect to their teaching in the classroom but muzzled elsewhere. To this day some university administrators and board members continue to act as though this should be the rule professors should not rock the boat, they say, when the university has to deal with private patrons, sensitive governments and the like, none of whom usually appreciate anything other than total blandness. In political terms such pressure is more frequently applied to the Left than the Right for obvious reasons. These days the issue does from time to time arise, however, in connection with views from the extreme Right, whether allegedly neofascist, racist or from supporters of views similar to those of the rulers of Iran. The opinions in question may be far from the middle ground, but it is better to tolerate than to repress. Rules to suppress the Right will almost certainly be used in time to suppress the Left. Furthermore the Right is much more likely to be able to exercise the power to discipline since they are more frequently in power. Why give them extra tools?

What protects professors from reprisals by politicians, board members or colleagues who dislike their views is tenure. A tenured professor can only be dismissed for gross incompetence, persistent neglect or moral turpitude, established before an independent arbitration or tribunal. The job of the arbitrators is to find out whether the reasons for the proposed dismissal are sound or whether they mask unstated reasons such as political prejudice. This is the essential meaning of tenure, and it is logically inconsistent of the Globe and Mail, for instance, on the one hand to urge the defence of academic freedom but elsewhere to oppose tenure which provides the sole practical guarantee for that freedom.

University professors should also have the right to choose freely their topics of research and to publish the results. This is important because research must not simply become an instrument of the wishes of the establishment. Some research ought to challenge accepted views, for how else can society make progress in such areas as health and toxicology, the environmental sciences and the social sciences. However, CAUT believes that there are obligations that go with this right. For example, the research must be made public as should the sources of the funds. University professors cannot claim the free market of ideas unless that market is truly free and open. Research, whether for government, private industry, or any other agency, which is intended to remain secret ought not to be undertaken by universities since the results of

Recent publicity surrounding the research of Professor Philippe Rushton at the University of Western Ontario has resulted in further debate — not all of it well informed — on the questions of academic freedom and tenure.

While we should be pleased that academic freedom has been defended by most commentators, we should be concerned that the meaning of academic freedom and its relation to tenure is not as well understood as it should.

such research cannot be subject to public debate. Furthermore professors have an obligation to declare the sources of their grants because it is reasonable to debate whether or not the source has tainted the research. This would apply, for instance, to a professor who undertook paid research from the tobacco industry on links between tobacco and cancer. We should not prohibit the research but we should know where the money comes from. Universities should have rules insisting on both these points.

Universities have got themselves into something of a bind by insisting that all applications by individuals for outside grants should be vetted by the university administration. This has the unfortunate effect of making it appear that the university approves the research in the applications it allows to go forward. It is reasonable for the university to want to know and approve any use of the university facilities or any serious encroachment on the professor's time for teaching. It should also require disclosure of significant research commitments and the sources of funding. But it should not go

However, the situation changes when professors decide that their research should be part of their academic record and thus part of their claim to the continued holding of their post. Why should this be so? University professors hold their positions as a consequence of qualitative judgments. Initial appointment, the granting of tenure, certain salary decisions, and promotion all involve judgments regarding the quality of the teaching and research of the individual involved. Peers in a university department thus have an obligation to judge the quality of teaching and research for promotion, merit, and the like, according to their local by-laws or collective agreement and according to the norms described by CAUT in its document "What is Fair?". Who should do this? The short answer is the experts in the field. This is where peer judgment is involved. It is also the moment when prejudice and pressure can be applied surreptitiously to ensure that only certain peers are asked or that only mainstream research is approved. CAUT policies provide safeguards against such

There has already been a formal independent hearing at the University of Western Ontario which held that a tenured post was not a sinecure and that the university had the right and obligation to judge the quality of the teaching, research and service of the individual. In this case the tribunal upheld the right of the university to fire the tenured professor concerned. In two recent cases in the medical area at Harvard, researchers were forced to leave the university as a consequence of allegations of research fraud and, in one case, questionable research methods as well. On the other hand, when professors receive favourable decisions in regard to their performance, they have every right to assume that a favourable judgment has been made on the quality of their teaching and research. Not, of course, in the case of research, a judgment on whether the research was wise useful, or in the main stream, but whether or not it followed accepted scientific norms in the gathering and use of evidence, etc. If the research failed to follow such scientific norms without a good reason for doing so (for example, a challenge to a particular scientific methodology), then the department has the obligation to make a negative judgment.

negative judgment.

If the questions raised about the teaching or research of an individual are sufficiently grave, then the university administration has an obligation to institute appropriate disciplinary sanctions up to and including dismissal. In almost all Canadian universities the decision to move towards dismissals is the responsibility of the President. The President's judgment would, of course, ultimately be tested before an independent arbitration or tribunal as noted above, unless the professor chose to resign. Here tenure protects the right of professors to choose unpopular research themes and to publish the results of that research, but it does not protect them from the consequences of shoddy

On the other hand, if a professor considers some of his or her research a private hobby and not part of their university record, the university should have no official interest. After all professors have conducted research, written and advocated all manner of views in areas outside of their formal academic expertise, from the merits of vitamin C to world federalism, without necessarily claiming that this work should be part of their official university research record.

An even more difficult question arises about teaching. Professors should be able to express their opinions in the classroom without censorship. They should be free to present those views with vigour. On the other hand professors and their departments have an obligation to that pluralism which is a necessary element in a civilized education. Thus professors should ensure that positions opposite to theirs are discussed and debated in the class, particularly when controversial matters are at issue.

An important, related question concerns the right of professors to invent courses on any subject they want. Such a right is certainly limited. Professors must convince their department and usually the university senate or general faculties council of the merits of any proposed course. The resources of the university are limited. It may prefer to invest in something else. It may consider that enough courses are offered in the area. It may not have enough books in the library or space in the laboratories. Universities should not use this power in order to promote blandness and discourage controversy. It is ultimately the

responsibility of university senates or general faculties' councils to judge if new courses are warranted, intellectually stimulating, within the budget of the university, and deal suitably with contentious material.

Are there other responsibilities relevant to this discussion which the university ought to consider? I think there are, although here I am speaking for myself, not necessarily for CAUT. It seems to me that the university has an obligation to ensure that its students are exposed in a formal way to a sophisticated discussion of the roots of western civilization, of the history, politics and economics of this country, and of the civilizations of other non-European peoples. They also have a responsibility to ensure that all students have a basic understanding of scientific methods and what can be achieved, for good or for evil, by the use of science. Universities have talked a lot about this obligation but not done very much about it, usually retreating into bromides about how impossible it would be to create such a curriculum. At the moment the major research universities in the United States are wrestling with this very problem, particularly the third of these issues, how they can ensure that their students know about the non-European world and about the history and culture of the substantial minorities in the United States? Perhaps one statistic will tell us why this is so important. This year 53% of the undergraduate body at the Berkeley campus of the University of California is Mexican, African- American, Asian or North

I believe the university also has an obligation to search out research funds from government, industry and the foundations to ensure that there is research about the real questions involved in a multicultural and multi-racial society such as our own. Given the current population mix in areas such as Vancouver, southern Ontario, Halifax or Montreal, all the major research universities should ask themselves what they are doing in this area and, if the answer is not very much, what they intend to do about it.

Academics must have the freedom to pursue intellectural interests and to publish the outcome of their research. They must have the freedom to teach what they believe to be important within the framework of a pluralistic debate. In this way the community at large will be well served by some of the best minds in the country. Students too will be well served in receiving a civilized, liberal and stimulating education. The guarantee of such academic freedom is the institution of tenure. Let us remember that fact every time an academic is involved in a public controversy. In appreciating the freedom we should not lose sight of the protection which makes it possible.

### **CONFIDENTIALITY CRITICIZED**

In a recent arbitration Martin Teplitsky, Q.C. made the following remarks with respect to confidential opinions:

Mr. Sack submitted that the confidentiality flows from a misinterpretation of Slavutych v. Baker, (1976) 1 S.C.R. 254. In that case the criticism was confidential because it was promised to be confidential. Similarly, Galligan, J. in the Divisional Count in Re Ruiperez assumed that an offer of confidentiality was necessary to secure opinions. I am unable to detect any legitimate interest in confidentiality when the person (i.e. a colleague or department head) tenders a criticism in

respect of a person who has no power to injure his critic. Although confidentiality in the area of criticism is likely to spawn critics it is equally likely to foster irresponsible criticism.

Indeed Slavutych itself is an example of intemperate criticism protected by confidentiality. In my opinion, if an equal is unwilling to criticize without a protective cloak of confidentiality, the criticism is better left unsaid. It is unfair to the person criticized not to know the course of criticism. Without such knowledge the person criticized is in no position to challenge the objectivity of the critic.

# THE FADING ECONOMIC STATUS OF THE ACADEMIC

\* David A. Balzarini Department of Physics, UBC

cademics are not paid well. There has been a dramatic decline in the relative salaries of the academic population over the past two decades. The deterioration in salaries of academics compared with the salaries and wages of other Canadians is displayed in Figure 1 where the changes are compared with the consumer price index for the years since 1971. The situation of the typical Canadian has shown some improvement whereas that of the typical academic has worsened considerably. Academics have lost about 20% relative to the average Canadian.

Does the average Canadian realize the plight of the academic? Does the average Canadian know that the typical academic entering the profession in the last twenty years can expect to earn less in her or his lifetime than the typical tradesperson or school

Some of the sections seem not to be about salaries but are relevant because of their bearing on planning and costing of salaries and on the understanding of academic salaries. Given the possibility that some readers may not wish to read the whole article (although the author would like to believe otherwise), the following graph and table are presented here although they are not discussed until later in the article. Figure 2 and Table 1 illustrate average salary

#### THE SHIFTING DEMOGRAPHY

Each year the 'average academic' ages one half year. This statement might suggest to some readers that academics have found the fountain of youth in that they have managed to cut the ageing process in half. Unfortunately, this is not what the statement means, It means that since the end of the high growth era of Canadian universities two decades ago, the 'academic growth bulge'

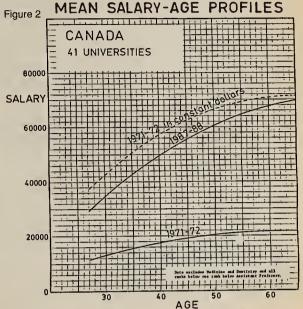


Figure 1

CANADA AVERAGE WAGE • 10 % 0 CANADIAN UNIVERSITY FACULTY - 10% Adjusted to 1971 Dollars YEAR

teacher? Does the average Canadian know that the typical academic can expect to earn less than half as much in a lifetime as dentists, lawyers, and accountants who usually spend much less time in education and training than the typical academic? Not only is the public unaware, but too often academics themselves are myopically unobservant of the declining economic position of the profession.

The fading economic status of the profession is illustrated in this article by graphs and tables of data. Some aspects of academic salaries which play a significant role in the misunderstanding of academic salaries and in the planning of salaries by Universities are also discussed in this article. The readers of this article probably range from the naive to the expert. We will risk boring the latter in the interests of the former. The article is divided into sections.

12989

15381

42602

167.6% 177.0% 184.6%

Age: 1971-72

Change

40

17394

49504

is moving through the demography. Figure 3 and Table 2 illustrate this changing demography. In an ideal situation, the average age would not increase at all. It should be pointed out that it is not the existence of the 'peak' in the demography but rather the shifting of this peak with time which leads to problems in the funding of academic salaries. The demography need not be uniform for relative cost stability of salaries. The funding of salaries is affected by the increasing of the average age towards the higher paid end of the salary system.

#### CAREER ADVANCEMENT SALARY INCREASES

One aspect of academic salaries which is often misunderstood is career progress and its separation from general salary increases. To illustrate this concept

consider the following groups: master and AVERAGE SALARY VERSUS AGE 50 20281 19027 21155 21649 60500 198.3% 205.3% 212.9% 191.5% EFFECTIVE MEAN SCALE INCREASE = 188.5% CHANGE IN CONSUMERS PRICE INDEX DURING PERIOD = 227.4%

slave, a manufacturing company, tradespersons such as carpenters, school teachers, and academics,

Salary increases for the master and slave system are easily analysed. The slave receives what the master gives her or him. A benevolent master may give wage increases and a wicked master may not. Barring revolution, the slave is locked in this

The manufacturing company has individuals filling different positions. A floor sweeper does not perform the same task as the president. If all salaries within the company are increased by X% or \$Y or whatever, the rate for each of these positions is increased. The individuals holding these positions receive X% or \$Y or whatever the general increase is. This system has 'career progress' salary increases in the following way. An individual may be promoted to a different level of responsibility and receive a higher rate of pay. This salary increase is separate from the general increase.

The carpenter or other tradesperson usually goes through a period of apprenticeship. A typical system may have four years Table 2

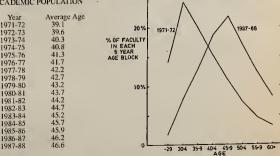
of apprenticeship during which time the person is paid 55%, 65%, 75%, and 85% of the journey-person rate. For all years after this, the person receives the same rate except for the general salary increases. Prior to reaching this plateau, the person receives 'career progress' as well as any general salary increase

The teachers' system usually has a rigid scale or grid but with a longer 'aging' period than the tradesperson. Typically, the rising portion is twelve years. Individuals who are on the plateau receive general increases whereas those who are still on the 'training' part receive a career progress increment as well as the general increase. We should point out that a few individuals may be receiving salaries above scale because of special duties such as counsellor, head teacher, principal, etc.

We should point out that not all salary scales are rigid. Some are minimum scales. For example, musicians and reportersusually have minimum scales. A person can be paid more than the scale dictates but not less.

Now we will turn our attention to academics. Judging by the current salary Figure 3

DEMOGRAPHY OF CANADIAN UNIVERSITIES AVERAGE AGE OF ACADEMIC ACADEMIC POPULATION



structure of academics, we might conclude that they have lifelong 'ageing' periods.
Salaries, whether governed by a rigid scale or by a flexible system, essentially have no plateau. The average 60 year old academic earns somewhat more than the average 50 year old who earns more than the average 40 year old, etc. Career progress salary increases appear to go on forever in most systems. Whether this should be true or not is questionable. Certainly, this salary versus age does not correspond to performance versus age of the average individual. At the very least we must say that this aspect of academic salaries results in misunderstanding by the public and also probably results in lower salaries than otherwise might be the case. Often academics themselves as well as the public don't understand that part of the salary increase is career progress and that the total increase received by individuals should not be compared with salary increases of other groups

#### WHAT DOES THE GENERAL INCREASE?

general salary increase (i.e., excluding any career progress component) is a salary increase to reflect changes in c o s t of living and changes in productivity of the economy. If all prices were doubled tomorrow, then a doubling of all salaries would leave everyone in the same position. Or would it? Immediately to mind comes the thought that it depends on whether one has debts or credits outstanding. If you have a mortgage, high inflation 'wipes out' the money you owe. On the other hand, the person holding the mortgage may lose the relative value of the investment.

It is not easy to develop an index to truly measure the 'cost of living'. The most widely used index, the consumer's price index, is a measure of the changing cost of a standardized basket of goods. This basket of goods is chosen to reflect how people spend their money, and the weighting put on various items is changed occassionally to reflect changing spending patterns.

A consumer's price index is also maintained for each of the larger cities. It should be pointed out that these indices compare the total price of a basket of goods to the price in a base year for the respective cities. These indices show time trends; the differences do not indicate differences in cost making intercity comparisons of the real cost to live' is a very difficult one although some Statistics Canada studies have been done. Spending patterns are different in different regions. People buy umbrellas and yachts in Victoria but mosquito nets and snowmobiles in La Tuque. It is easier to make regional comparisons at the poverty level (basic essentials) than at the average income level

We should point out that it is not always possible for wages to keep pace with the price index, something which is often demanded as a minimum wage increase. The economy of the country is not isolated from the rest of the world. Sometimes the price index is highly affected by changes in price of a component which is produced elsewhere. For example, suppose all Canadians drank one litre of wine per day and the price of wine suddenly tripled in the world. The consumer's price index would increase, but obviously we could not have wages increase to keep pace. Since wine is not produced in Canada, the price rise would reflect external conditions. The remainder of change. If the price of wine tripled, wine consumption may decrease and beer consumption increase.

Although some industries may lag others in

consumption increase.
As mentioned above, productivity ases in
the economy lead to real general salary
increases. The economy is usually able to
produce more efficiently as time goes on. The
gains in efficiency are not uniform in space
and time; some industries make large gains
and others make none. However, general
salary increases should reflect the average
productivity gain in the economy. One
sometimes hears that general salary increases
for increased efficiency should go only to the
particular industry in which there are gains.
This is a unquestionable argument. Clearly the
possibility of increases efficiency for the
keeper of the lighthouse or the traffic director
is virtually impossible. (Unless automatic
signals are installed!) On the other hand, has
the desk receptionist at an electronics firm
increased his efficiency just because some
scientist has made a great efficiency gain in
chip production. Should she, the scientist,
alone receive all the benefits of the gain?

grow from inexperienced young academics to xperienced old ones. Career progress through the ranks salary increases are meant to reflect changes in the prodctivity of an individual as he or she gains experience and should not be considered compensation for overall changes in the productivity of the national economy. Gains in the productivity of the whole economy should be reflected in the general scale increase. Testing of any salary system over historical periods will easily show that this must be the case.

Another question concerning salary increases which leads to misunderstanding and confusion is whether all salary levels in society or a group should increase by equal percentage, equal dollars, etc. Does inflation affect all salaries in the same way? If the price of a Ferrari increases more rapidly than the price of a loaf of bread, should we increase high salaries more than low salaries? (Perhaps not. If you bought a Ferrari last year, you will not have to buy another this year!) If the economy increases in productivity, should we apportion this increased production among individuals in proportion to their present salaries, i.e., percentage basis? Should we distribute it evenly on a dollar basis? Should we use it to boost the lowest end of the income spectrum? Should we use it to reestablish a nobility? Even these four possibilities would each have many advocates (with the possible exception of the last).

Table 3						
YEAR	COMPOSITE	FACULTY	CONSUMERS	INDICES ADJ		
IEAR	WAGE INDEX		PRICE INDEX	1971 DOLI		
	WAGE INDEX	EMPI INDEV	I RICE II DEI	COMPWAGE	FACULTY	
				100.0	100.0	
1971	100.0	100.0	100.0			
1972	108.4	104.2	104.8	103.4	99.4	
		109.4	112.7	103.5	97.1	
1973	116.6		125.0	103.5	95.6	
1974	129.4	119.4		106.6	97.5	
1975	147.7	134.9	138.5		99.0	
1976	165.7	147.4	148.9	111.3		
	181.6	157.2	160.8	112.9	97.g	
1977		165.1	175.1	110.1	94.3	
1978	192.g		191.2	109.5	91.5	
1979	209.4	175.0		109.5	90.g	
1980	230.6	191.3	210.6			
19g1	258.1	214.1	236.9	10g.9	90.4	
	283.9	236.9	262.5	10g.2	90.2	
19g2		247.1	277.6	109.4	89.0	
19g3	303.g			109.4	87.4	
1984	317.0	253.2	289.7		87.8	
1985	328.0	264.4	301.3	108.9		
1986	337.1	274.9	313.7	107.5	g7.6	
		285.5	327.4	105.8	87.2	
1987	346.3	283.3	52111			

- 1. Year is calendar year for Composite Wage and CPI and is the Academic year starting
- July 1 of the calendar year for the faculty.

  2. Composite Wage Index is formed from changes in Average Salaries and Wages.
- Faculty Index is formed from Effective Mean Scale Increase for the 41 universities used in this analysis. All Quebec universities and a few other small ones were excluded for missing data for most years.

Statistics Canada.

our economy could continue to operate in exactly the same way. ( This example also illustrates how spending patterns might the ease of giving salary increases, the average worker should receive a productivity increase based on the average for the whole

A better measuring index for comparing general salary increases is the average weekly earnings in Canada. This more truly reflects how salaries and wages are changing in the whole economy. Using this index over long time periods still has some difficulties. The lower paying service sector is growing more than the industrial sector. Also, the changing family and number of working parents leads to changes in the base for the index. In addition, Statistics Canada recently redefined the basis for this wage index to include all workers rather than those in certain industries. However, this wage index is still probably the easiest index to use.

One point which must be emphasized is that general salary increases should reflect economic change in the overall economy. Subject to some of the points raised above, this usually means inflation plus average productivity gains in the overall economy. There is often misunderstanding of this point Some individuals confuse overall changes in productivity of the whole economy with yhe changes in productivity of individuals as they

#### SALARY COMPARISONS OVER SPACE AND TIME

How does one compare salaries at Tamarack University with salaries at Black Fly University? How does one compare salaries at Beaver University this year with salaries at Beaver University three years ago?

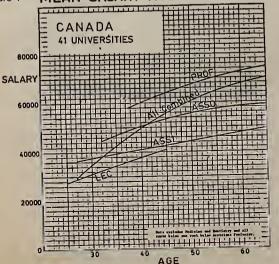
Salary comparisons over space and time are not trivial. For example, we could compare the average salary for all faculty members. This average is affected by demography and this fact makes this average almost useless. Salaries for older individuals are higher on average than for younger individuals. Therefore a higher average salary for a group may reflect that the group has an older demography.

We could compare average salary for each rank. Some of the demographic effects are reduced by this, but problems still remain. Promotion rates may differ over space and

A better way of making comparisons is to examine mean salary versus age, we call this 'Effective Mean Scale'. Some readers may find the mathematics of this concept puzzling whereas others may find it trivial. In any case, Figure 2 shows mean salary-age profiles for 1971-72 and 1987-88. The information is also displayed in Table I for those who are frightened by graphs. Figure 4 shows data for 1987-gg including profiles for each rank. Comparison over space and time of salary age profiles for each rank may be misleading because promotion patterns may vary with

In order to compare salary increases among universities or with other groups, we have developed an Effective Mean Scale Increase. This is simply the average increase in the Effective Mean Scale, calculated using the demography as a weighting function. This Effective Mean Sclae Increase (EMSI) is a much fairer measure for comparing increases among universities and with other groups. In more mathematical terms we can define EMSI as a sum or integral (see Figure 5)

#### of living between cities. The problem of MEAN SALARY-AGE PROFILES Figure 4



#### Table 4 Male-female difference in average salary 7.70% 5.77% 4.14% 0.99% Male-ternale difference in average sa Corrected for Age dependence Corrected for Faculty and age Corrected for discipline & the above Corrected for Rank & the above \$2271

$$\begin{split} \text{EMSI} &= \frac{100}{N_{T}(t_{1}) + N_{T}(t_{2})} \sum_{i} \frac{\left[\$\left(A_{1}, t_{2}\right) - \$\left(A_{1}, t_{1}\right)\right]}{\$\left(A_{i}, t_{1}\right)} & \left[N\left(A_{1}, t_{1}\right) + N\left(A_{1}, t_{2}\right)\right] \\ \text{EMSI} &= \frac{100}{N_{T}(t_{1}) + N_{T}(t_{2})} \int \frac{\left[\$\left(A, t_{2}\right) - \$\left(A, t_{1}\right)\right]}{\$\left(A, t_{1}\right)} & \left[N\left(A, t_{1}\right) + N\left(A, t_{2}\right)\right] dA \end{split}$$

The reason for choosing the weighting function as the average of the two times in question is that this insures better consistency when comparing the calculation obtained from two widely separated years with the calculation obtained compounding yearly EMSIs between the two end years. We have combined all disciplines and degrees in calculating the Effective Mean Scale Increase in this article. It is possible to construct the Effective Mean Scale Increase with separate components. The results show that the gap between the academic profession and the rest of

society is even more alarming.

Table 1 illustrates the mean salary age profile and the percentage changes for the group of 41 universities included in this study.

Trends are shown in Table 3 where an index based on Canada Average Wages and Salaries, and an index for University Faculty, and the Canada Consumers Price index are listed. The last two columns show the wages and salaries indices in terms of real (1971) dollars. Figure 1 displays these adjusted wage indices. The trend for academic salaries is alarming.

#### SEX AND OTHER DIFFERENTIALS

A topical issue is the concept of 'equal pay for work of equal value'. This issue has evolved from an older issue of 'equal pay for equal work'. The concept of equal pay for equal work is simple; two individuals performing the same job with the same output should receive the same pay. The concept of equal pay for work of equal value' is not as simple; it necessitates a measurement of value of a job function. It requires that we be able to declare that the performance of Job A is as valuable as the performance of Job B. Is the cleaning of sewers as valuable as the answering of telephones? Is the job of teaching and research performed by a Professor of Chemistry more or less valuable than the tasks performed by a Professor of Classics? Is the maintenance of the university plumbing more or less valuable than the teaching of law? Does the coach of the football team perform a service more or less valuable than the Professor of Marketing? Etc.

The concept of 'equal pay for work of equal value' is not accepted by everyone with the same meaning. Some individuals argue that salaries and wages are determined in the market place. Wages for a given job rise until enough workers are attracted to that occupation, etc. Attempts in the past to dictate wage rates

have not been very successful. Within the academic place, we may not have even satisfied the 'equal pay for equal work' doctrine, yet alone the 'equal pay for work of equal value' concept. Some academics argue that inequities exist: some groups or individuals receive less salary than others for the same performance. Unfortunately, analysis of available data is not always easy or straightforward.

It should be pointed out that some people interpret 'equal pay for equal work' as meaning that every academic should receive the same salary. This is not a necessary consequence of the 'equal pay for equal work' concept. Individuals who wish to argue for or against equal salaries for all should separate that concept from the one being discussed here. Most academics would probably argue that higher performance should warrant higher salaries. Most academics usually classify their

own performance as high. Usually they think their salaries are too low relative to others.

"98% of academics place themselves in the top 2% of their profession." Anon

This tends to confuse the issue of equity in salary policy. Analysis usually shows that an individual salary is affected more by the market in a particular discipline at hiring or afterwards, a person's age, the existence and nature of salary increase policy, etc, and less by performance. Many academics insist the contrary is true and that salaries are strictly determined by merit although some go to the other extreme and essentially say that merit means almost nothing in salaries.

"The grindstone is the wrong place to keep your nose" Anon

In any case this section does not deal with the question of merit; it deals with possible identification of class inequities and with interpretation of data.

The following discussion of salaries is directed at the possible existence of a male-female differential. Other class inequities are sometimes revealed in such analysis. No absolute conclusion is drawn because the analysis may have insufficient data. The author has carried out analysis with additional data for a limited set but the results will not be presented here. This article deals only with data which is usually on computer file at every university.

A word of caution should be emphasized when doing any mathematical fitting of data. This is especially true if one isdealing with small samples. Even with the larger universities, the problems of analysis are plagued by the huge spectrum of variables and parameters. Each Variable can have many different values. For example, age can range from about 25 to 65, although age is easier to handle because the natural assumption is that salary is a monatonic function of age. Other variables are less tractable. There are almost a dozen different degrees, a dozen faculties, several dozen disciplines, etc. If all variables were independent, it would be possible to have 40,000,000,000 faculty members at a large university, each unique. In order to eliminate some of the variables, it is best to reduce the data set. In this way one can analyse a set almost as large but with much less difficulty. The following results were obtained by using only a few variables after the data base was reduced. Medicine and Dentistry were not included. Only faculty with doctorates were included. In addition, the analysis was focused on similar career paths by eliminating all faculty who were appointed later than their thirty-fifth year of age and by eliminating all faculty who did not finish their doctorates within two years after their university appointments. The following results were obtained.

Why some disciplines are higher paid than others is beyond the scope of this article. Why so few women study Physics is beyond the scope of this article (although the author would like to know the answer). These problems are unlikely the result of the Academic world alone; society and the media discourages women from entering some disciplines.

\* Dr.Balzarini is the former Chair of the Salaries Committee of the Salaries Committee of the CAUT Coop.

### LEADING CONSTITUTIONAL DECISIONS OF THE SUPREME COURT OF CANADA

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## **Executive Director**

#### Centre for Constitutional Studies

The Centre for Constitutional Studies, at the Faculty of Law at the University of Alberta requires an Executive Director who will be responsible for the day to day operation of the Centre. Among the duties of the Executive Director are the following:

- Maintenance of the Administrative Office of the Centre;
   Supervision and co-ordination of employees of the Centre;
   Supervision of accounts and preparation of funding proposals.
   Supervision and management of the Charter of Rights Daip Base.

- 4. Supervision and management of the Charter of Rights Data Base.

  5. Editor of the Centre newsletter,

  6. Liaison with the University community, other research institutes and the community at large;

  7. Administration of the Public Lecture Series;

  8. Co-ordinator of conference preparation and organization;

  9. Co-ordination of the publishing activities of the Centre;

  10. Co-ordination and lightical support for Visiting Scholars;

  11. Co-ordination and lightical support for Visiting Scholars;

  12. Other duties as assigned by the Board.

Applicants for this position should have an LL.B. or graduate training in the social sciences or humanities and must have demonstrated administrative capabilities. Fluency in both official language in a capabilities.

languages is an asset. One year with the opportunity for renewal Salary Range: \$35,000 - \$40,000

Deadline: Application must be received no later than April 30th, 1989.

Apply to: A. Anne McLellan, Chair, Management Board, Room 453, Law Centre, University of Alberta, Edmonton, Alberta Canada T6G 2H5

Telephone: (403)492-4445 FAX: (403)492-4924

The University is committed to the principle of equity in employment



University of Alberta Edmonton

# DEPARTMENT OF COMMUNICATION, SIMON FRASER UNIVERSITY

(Burnaby, B.C., V5A 1S6) is seeking applicants for two positions beginning in September, 1989: (1) Assistant Protessor; and (2) Visifing Limited-Term Appointment (telecommuni-cations, communication law, new information technologies). Applicants must have a Ph.D. in a related discipline plus evidence of a well developed research interest in the Oppartment's areas of concentra-tion; media, technology, and policy. Among the needs identified in conjunction with these positions are news analysis, political communi-cation, communication policy, advertising, telecommunications, media content analysis and new information technologies. The Oppartment has a large undergraduate program and also offers M.A. and Ph.D. degrees. Prefer-ence will be given to candidates who are effgible for employment in Canada at the time of application.

Applications must be accompanied by a cumculum viae and the names and addresses of three references. and must be received by the Department Chair, Prof Liora Salter, by 1 May 1969. These positions are subject to final hudgefary approval.



University of Alberta Edmonton

## Home Economics Position Kenyatta University University of Alberta

Position: Replacement faculty for Department of Home Economics.

Location: Kenyatta University, Nairobi, Kenya.

Responsibilities: Teaching undergraduate courses in home economics. Preferred areas in rank order: Family Studies including child development, introductory Foods and Nutrition, Clothing and Textiles. Initiation of research projects related to area(s) of teaching.

Qualifications: Master's degree required, Ph.D. preferred. Previous experience in developing country

Appointment and Salary: Assistant Professor Salary Range \$33,144.00 - \$37,267.00 dependent upon qualifications. Housing is provided by Kenyatta University.

Application Deadline: May 31, 1989.

Beginning Date: September 1, 1989 for one year with possible two year extension.

General Information: The University of Alberta and Kenyatta University have entered into a CIDA/ICDS funded project designed to strengthen the Department of Home Economics at Kenyatta
University, Kenyatta University is located about 25 kilometers from Nairobi, Kenya. A three year degree focusing on educational roles is offered by the Department of Home Economics. There are fifteen faculty members with three currently on educational

Application Procedures: Send letter of application, current resume and the names, addresses and phone numbers of referees to:

Dean E. Murray, Project Director Faculty of Home Economics 115 Home Economics Building Iniversity of Alberta Edmonton, Alberta T6G 2M8

The University of Alberta is committed to the principle of equity in employment

# QUEEN'S UNIVERSITY AT KINGSTON INDUSTRIAL RESEARCH CHAIR IN MANAGEMENT AND TECHNOLOGY

Applications are invited for the ALCANINSERC Industrial Research Chair in Management and Technology established under the Industrial Research Chair Program of the Natural Sciences and Engineering Research Council with support from Alcan International Ltd.

The position will be a tenure-track appointment at a senior level in the Faculty of Applied Science with a cross appointment in the School of Business. The Chair is intended to focus activities in the broad area of technological change, innovation and the management of nnology in a competitive environment.

The Professor is expected to provide leadership in research in Management and Technology, to work with faculty and students in the Faculty of Applied Science and in the School of Business, and to broaden and strengthen linkages between Queen's University and the external technological community through his or her involvement in research and teaching.

Preference will be given to candidates having a background in engineering, and substantial lull-lime management experience in research-based industry. The appointment is conditional upon final approval by NSERC.

In accordance with Canadian Immigration requirements this advertisement is directed to Canadian citizens and permanent residents. Men and women are equally encouraged to apply.

Applications which should include a curriculum vitae and the names of three references should be submitted by May 1, 1989, to:



Dr Wm McLaichle Chairman of the Selection Committee Industrial Research Chair In Management and Technology Richardson Hall Queen's University Kingston, Ontario K7L 3N6

## PROGRAM COORDINATOR **Distance Education**

The Division of University Extension and Community Relations requires e Program Coordinator to provide consultative service to the University community in the planning, development and evaluation of Distance Education courses and programs. The Program Coordinator provides Instructional design consultation to project teams; organizes and coordinates course production; assumes administrative responsibilities at the request of the Manager, Distance Education Services; contributes to the field of distance education through presentations and scholarship. presentations and scholarship.

QUALIFICATIONS: Master's degree in edult or distance education plus three to five years of related experience which includes program development/evaluation, production of instructional materials in print, audio or video, and using audio or video conferencing for instruction; or an equivalent or equipment of profuserior to add to the conferencing for instruction; or an equivalent or experiments or an extraction of the conferencing for instruction; or an equipment of the conferencing for instruction or an equipment of the conferencing for instruction or an equipment of the conference of equivalent combination of education, training and

SALARY: \$31,807 to \$38,554 per annum (\$44,337 Ceiling). This is a continuing position, subject to the availability of funding.

Candidates should submit a letter of application outlining their particular interests and qualifications relating to this position before Mey 1, 1989 to: Personnel Servicee, University of Victorie, P.O. Box 1700, Victorie, B.C.



# UNIVERSITY \*GUELPH

### DEAN, ONTARIO AGRICULTURAL COLLEGE

The University of Guelph invites applications and nominations for the position of Dean of the Ontario Agricultural College. The appointment will commence on July 1, 1990.

The University of Gueiph has a special responsibility within the Onlairo University system to serve agriculture in the broadest sensor. The University is committed to a leadership position in education, research and extension related to the use of the provision, the agriculture and tood system, whether the provision, thrancal or human. We have a major concern equation the impact of resource use on our environment and on suciety in general.

One of seven Colleges in the University, the Ontario Agricultural College offers a wide range of undergraduate, graduate and research programs in support of agriculture and has proximately 180 faculty international activities. The College has a proximately 180 faculty members in nine acade could be a considered to the College has a proximately 180 faculty members in nine acade and the programment of the College has a considered to the College has a considered to the College has a college for the College currently a profile approximately 1300 students in its undergraduate and diploma programs and 460 students in its M.Sc., MAgr. M.L. A. and Ph.D. graduate programs. The total annual research budget is in excess of \$22 million.

Applicants should have a proven record of leadership and achievement in education and research and a broad understanding and agriculture as it relates to universities, industry, government and society at large. The appointment as Dean will be for a few year term ensurable for an additional five years, and the proposition of the propos

In accordance with Canada Immigration requirements, this advertisement is directed to Canadian citizens and permanent

The University of Guelph is committed to Employment Equity

# McGill

#### Dean of the Faculty of Arts

Nominations and applications are invited for the position of Dean of the Faculty of Arts of McGill University. The appointment, effective September 1, 1989, is normally for a five-year term and may be

The Dean of Arts is responsible to the Vice-Principal (Academic) for the supervision and administration of the academic programs, budgets, and all activities of the Faculty. Candidates should have appropriate scholarly and administrative experience; facility in both English and French is desirable

In accordance with Canadian immigration requirements, this advertisement is directed in the tirst instance to Canadian citizens and permanent residents.

Nominations and applications will be most useful if accompanied by a detailed curriculum vitae and the names of three referees, and should

> Dr. S.O. Freedman Vice-Principal (Academic) McGill University 845 Sherbrooke Street West Montreal, Quebec H3A 2T5

#### UNIVERSITÉ D'OTTAWA Criminologie

UNIVERSITÉ D'OTTAWA
Criminologie

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### UNIVERSITY OF OTTAWA

Criminology

The Department of Criminology invities applications for a full-time position beginner of the control of the contr referees, should be sent before April 30, 1989, to: Professor J. Laplante, Chair, Seerch Committee, Department of Criminology, University of Ottawa, Ottawa, Ontario, K1N 6N5.

## Department of English Tenure and Sessional positions

Incure and Sessional positions.

Apolications are invested for two positions: 1) A probationary, leruize-track appointment et the Assistant or Associate rank in Composition/Rhotore. Required: Ph.D. in Composition Rhotore, prior degree in iterature; experience in legitide the stabilished research and publication entitles or potential; lamiliarity with Writing Across the Curriculum. Duties: a) to condinate the English Department's Willing Programme; b) to help develop a Composition-Literature degree stream; c) to teach introductory, intermediate, and senior undergraduate course in composition and helpone; d) to serve on the university's Writing Arcoss the Curriculum Programme should be a senior undergraduate course in composition and helpone; d) to serve on the university's Writing Arcoss the Curriculum Programme so conducting Team. Load, 23 teaching (2 outless); 1/16, citizature in Composition Programme of Composition Programme of Composition Programme; b) and the Composition Programme of Composition Programme; b) as a server of the Composition Programme of Composition Programme; b) as a server of the Composition Programme of Composition Programme; b) as a server of the Composition Programme of Composition Programme; b) and the Composition Programme of the Composition Prog

Please send C.V., transcripts, and have three referees write directly to: Dr. Jon Gondor, Dean of Humanilles.



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## The University of Waterloo invites applications and nominations for the position of Dean of the Faculty of Engineering

Candidates are sought for the position of Dean of the Faculty of Engineering. The appointment will commence on July 1, 1990, or as soon as possible thereafter, for a five-year term. The University's senior Faculty, Engineering pioneered co-operative education in Canada when it enrolled its first students in July, 1957. All undergraduate programs are on the cooperative system, in five departments: Chemical, Civil, Electrical, Mechanical and Systems Design. A program in Geological Engineering shares resources between Civil Engineering and Earth Sciences in the Faculty of Science. All disciplines offer Graduate programs leading to both the MASc and PhD degrees. The Department of Management Sciences offers graduate programs and degrees in Management Sciences. There are currently 165 full-time faculty members, more than 2,500 undergraduate students and 1,400 graduate students; total University enrolment is approximately 24,000. The Faculty has a distinguished record in research.

Candidates should have a proven record of scholarship, teaching and administration. Applications and nominations should be submitted by June 12, 1989, but the Committee's preference would be to receive applications and nominations as early as possible. Where possible, applications and nominations should be accompanied by detailed curricula vitae and the names of three referees, will be treated in confidence, and should be directed to:

> Ms. R. Atwater-Hallatt Assistant University Secretary University Secretariat University of Waterloo Waterloo, Ontario N2L 3G1

In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents. Applications from women candidates are particularly welcome. An Employment Equity Employer.

### St. Francis Xavier University Physics

The Physics Opportunity of the Physics of the Physi

UNIVERSITY OF TORONTO(See's borough College), Onterio.
Ass. Pol. French 3 Year corractually limited appointment. Outes:
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# DEVELOPMENTAL PEDIATRICIAN / CHILD NEUROLOGIST / PEDIATRIC PHYSIATRIST

Wascana Rehabifitation Centre has a staff position available to provide feadership in the field of Developmental Pediatrics/Child Neurology/Pediatric Physiatry on multidiscipfinary assessment and management teams.

The Centre is a progressive clinical facility with 269 in-palient beds and an active out-pafient program which is currently undergoing a \$60 million re-development.

The position supports patient families as well as community and centre-based programs providing medicafly refated services to preschool and schoof aged children with development disabilifies

Salaried or fee-for-service arrangements are available, including relocation assistance. Salaried personnel will be eligible to participate in employee benefit plans including retirement, lile insurance, dental, sick leave, and disabitiy.

For further information, please direct your inquiries or send a curriculum vitae to:

Raymond C. Tervo, M.D. Raymond C. Tervo, M.D. Director Children's Rehabilitation Program Wascana Rehabilitation Centre 2180 – 23rd Avenue REGINA, Saskatchewan S4S 0A5 Telephone (306) 359–5404

#### ASSISTANT / ASSOCIATE PROFESSOR OF ANIMAL SCIENCE (TWO POSITIONS)

The Nova Scotia Agricultural College, Truro, Nova Scotia, invites applications for two faculty positions in the Arimal Science Department. The College, with 500–600 students, has served Atlantic Cenads since 1905. The complete four years of the B.Sc. (Agr.) program began in 1980. Primary responsibilities of the Annual Science Department teaching (in technical programs in the program of the pro

#### ANIMAL PHYSIOLOGIST / ENDOCRINOLOGIST

The incumbent will feach general and applied physiology and fur animal production at the technical and undergraduate levels and conduct research in animal physiology / endocrinology as applied to agricultural

Qualifications:

A Ph.D. degree or equivalent in animal physiology or endocrinology as applied to agricultural species. A genuine interest in fur animal production, combined with either relevant experience or a willingness to develop expertise in this feld is essential. Candidates with a Master's degree and exceptionally strong experience may be considered.

Selary Renge: Commensurate with qualifications and experience

Please quote competition Number: 89-9137

#### ANIMAL GENETICIST

**Duties:**The incumbent will teach animal genetics and sheep production at the technical and undergraduate levels and conduct research in animal genetics as applied to agricultural species.

Qualifications:

A Ph.D. degree or equivalent in animal genetics as applied to agricultural species. A genuine interest in sheep production, combined with either relevant expenence or a willingness to develop expertise in this field is essential. Candidetes with a Master's degree and exceptional strong experience mey be considered.

Salary Range: Commensurate with qualifications and experience.

Please Quote Compefifion Number: 89-9138

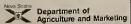
In accordance with Canadian Immigration requirements, these advertisements are directed to citizens end permanent residents of Canada.

Closing Date: April 28, 1989

Full Civil Service benefits.
The Province of Nova Scotia is an equal opportunity employer.

Applications and/or resumes should be submitted to the Nove Scotia Civil Service Commission, P.O. Box 943, Halilax, Nova Scofia, B3J 2V9

Applicants are encouraged to send copies of three publications representing scientific achievement to the above address.



#### St. Francis Xavier University Food Science Food Service Management

Food Service Management
The Ospartment of Nutrition and
Consumer Studies of St. Francis
Xone University
Xone St. Francis
Xone

# St. Francis Xavier University Biologist

Limited-term appointment, sabbatical replacement. Duties include teaching a course in Introductory Biology, and one half course from Population half course from Population Ecology, Invertebrate Zoology, or Comparative Vertebrate Ana-tomy. In accordance with Canadian immigration regula-fions, this advertisement is directed to Canadian citizens or permanent residents. Submit curriculum vifae, names, addresses, and tetephone addresses, and tetephone numbers of three referees by June 15, 1989 to: Dr. G.E. Newsome, Chair, Selection Committee, Department of Biology, St. Francis Xavier University, Antigonish, Nost Scotia, Canada, B2G 1CO, Telephone (902) 867–2274.

#### DEPARTMENT OF FRENCH

Applications are invited for 2 possible tenure track appointments at the rank of Assistant Professor in the Department of French on the Fredericton Campus of the University of New Brunswick. Candidates must hold a doctorate, have native or near-native command of French with some experience in university teaching, and will be expected to teach primarily language improvement courses at the undergraduate level, with the possibility of feaching in at least one of: French Canadian Literature, Transfation, Comparative Structure, Lexicology and Syntax. Salary commensurate with qualifications and experience (1989-90 floor \$31,721.). Send letter of application, including full curriculum vitae and names of three referees, to:

> Dr. D.F.G. McIntyre, Chairman Department of French University of New Brunswick P.O. Box 4400 Fredericton, NB E3B 5A3

These appointments are subject to budgetary epproval, and will take effect on or after 1 July, 1989, with closing date for competition declared when positions are filled. In accordance with Canadian Immigration requirements, this advertisement is directed to

Canadian citizens and permanent residents. UNIVERSITY OF NEW BRUNSWICK

# WESTMINSTER INSTITUTE

#### SENIOR RESEARCH ASSOCIATE - ASSISTANT DIRECTOR

A Senior Research Associate (Applied Ethics) - Assistant Director appointment will be made all Wesfiminster Institute for Ethics and Human Values, London (Ontario), effective July 1, 1989. Qualifications. Ph.D. in Philosophy (publications, demonstrated research and teaching ability, ten years' expenence destrable); administrative experience (three years). Responsibilities include: (1) administrative experience (three years). Responsibilities include: (1) administrative experience (three years). Responsibilities include: (1) teaching in the Philosophy Department of ropicet initiation, writing grant proposals, conduct of proposed inquiry, management of grants, leaching in the Philosophy Department or the Health Sciences Faculties of the University of Western Ontario (one course maximum), participation in professional programs, smiled activity in consultation, personal research, public information and public education, (2) cartian shared administrative dulies. Three year contract, renewable, one month vacation annually, pension, health and life insurance benefit package: salary commensurate with qualiteations and experience, presuming budgetary approval. Jointly established in 1979 by Westminster College and The University of Western Ontario, the Institute's research has tocussed on bioethics, values and the law, tusiness and professional ethics, environmental ethics and ethical aspects of population. Closing date for applications. April 30, 1983. Send letter of application together with Curiculum Vitae and the names of three referees to Dr. Abbyann Lynch, Director, Westminister Clondon, Ontario Canada, N6G 2K3. London, Ontario Canada, N6G 2K3.

In accordance with Canadian immigration requirements, this adverlisement is directed to Canadian citizens and permanent residents of

"AN EQUAL OPPORTUNITY EMPLOYER"

# McGill

### Vice Principal (Planning)

The University invites nominations and applications for the position of Vice-Principal (Planning). The appointment, effective August 1, 1989, is normally a five-year term and may be renewed. Men and women will be equally considered.

Reporting to the Principal, the Vice-Principal (Planning) will be responsible for institutional planning and research; relations with government departments and administrative bodies, and with other universities; and computer services including the Computing Centre, milcrocomputer support, data networks, and the telephone and data communications system. Candidates should have appropriate scholarly and administrative experience. Facility in both English and French is desirable.

In accordance with Canadian Immigration requirements, this advertisement is directed to Canadian citizens and permanent residents.

Nominations and applications, accompanied by a curriculum vitae and the names of three referees, if possible, should be submitted by April 30, 1989, to:

David, L. Johnston Principal and Vice-Chancellor McGill University 845 Sherbrooke Street West Montreal, PQ H3A 2T5



### Vice-Principal(e) (Planification)

L'université est à la recherche de candidat(e)s pour le poste de vice-principal(e) (planification), à compter du 1 er août 1989 dans le cadre d'un mandat de cinq ans, renouvelable. Cette annonce s'adresse indifféremment aux hommes et aux femmes.

Le (la) vice-principal(e) (planification) relève du principal et Le (la) vice-principal (e) (planification) relève du principal et s'occupe de la planification et de la recherche institutionnelles, des relations avec les ministères, les organismes administratifs et les autres universités, des services informatiques dont le centre de calcul, de l'infrastructure microinformatique, des réseaux de données et des systèmes téléphoniques et de transmission de données. Les candidaté, els obievent posséder une solide expérience administrative et universitaire et s'exprimer avec alsance en anglais

Conformément à la législation canadienne en matière d'immigration, cette offre d'emploi s'adresse au premier chef aux citoyen(ne)s canadien(ne)s et aux résident(e)s permanent(e)s.

Faire parvenir les candidatures, accompagnées d'un curriculum vitae et du nom de trois répondant (e)s, si possible, avant le 30 avril 1989 à:

Monsieur David, L. Johnston Principal et vice-chancelier Université McGill 845, rue Sherbrooke ouest Montréal (Québec) H3A 2T5

heHospital for Sick Children, a fully accredited, 650-bed paediatric teaching hospital, affiliated with the University of Toronto, seeks a

# Pathologist-in-Chief

This is a joint appointment with the Department of Pathology,

The hospital department has a well-equipped laboratory with facilities for electron microscopy, immunohistochemisty, cytology and histology aswell as a medical staff of seven. Applicants should be paediatric pathologists with an established research program, excellent teaching skills and appropriate administrative experience.

Candidates must have a FRCPC or equivalent and be eligible for licensure in the Province of Ontario. In accordance with Canadian Immigration requirements, this announcement is directed to Canadian citizens and permanent residents. Potential candidates should submit their curriculum vitae by May 30, with the names of 4 referces, quoting file # D021D, to: Mary Babyn, Pathology Committee, The Hospital for Sick Children, 555 University Avenue, Toronto, Ontario M5G 1X8



THE HOSPITAL FOR SICK CHILDREN



DEPARTMENT OF BUILDING SERVICES ENGINEERING DEPARTMENT OF MATHEMATICAL STUDIES

The Hong Kong Polytechnic was established in 1972. With a student population in excess of 25,000 end e full-time ecademic staff establishment of close to 1,000, it is the largest of the higher education institutions in Hong Kong, and offers edizance courses spanning a range of awards (up to and inducing post graduets level) and modes of attendance. Although now close to its planned capacity, it continues to take e dynamic and vigorous approach to its wither development, including research, consultancy, technology transfer, and partnership with industry, commerce end government.

The department of Building Services Engineering offers a sandwich B. Eng (Hons) degree and a Higher Diploma in Building Services Engineering, Higher Certificate courses and Endorsement Units are elso offered on a part-

The Department of Mathematical Studies offers both full-time and part-time programmes with major studies in the mathematical disciplines. These include a Higher Diploma in Mathematics, Statistics and Computing, an Associateship in Applied Statistics and a Higher Certificate in Mathematical Studies. The Department also collaborates with the Departments of Applied Physics and of Applied Biotogy and Chemical Technology in offering a mixed-mode B.S.c.(flons) degree course in Combined Studies in Mathematics and Science. In addition, it also provides service teaching to students in other disciplines.

#### QUALIFICATIONS FOR APPOINTMENT:

Candidates should have appropriate academic end/or professional qualifications, together with successful and relevant experience in, for example, tertiary education, industry, the public sector, advanced teaching, research or consultancy. The successful candidates will also be required to demonstrate the personal qualities necessary to lead the department in its diverse functions.

Consideration will be given to the award of the title of Professor to a suitably qualified appointee. It would also be the Intention to confer the title upon an appointee currently holding the title.

#### SALARY AND CONDITIONS OF SERVICE:

Not less than HK\$433,800 p.a. + 25% gratuity (CAN\$1=HK\$6.52 on 11.3.89)

The initial appointment will be made on a fixed term contract of four years at the end of which a gretuity equal to 25% of salary earned over the whole contract period will be payable. Subject to mutual agreement, a further appointment may be oftered at the end of the initial contract period, either on the basis of a further gratuity bearing fixed term contract or on superannuable terms. Other benefits include subsidised housing, leave, passages, medical and dental benefits, and children's education allowance.

Applications including curriculum vitae and names of three referees should be sent to the General Secretary, Hong Kong Polytechnic, Hunghom, Kowleon, Hong Kong before 30 April 1989 (Fax: 852 3 7643374). Further information available from same office.

#### DEAN SIFC

# Saskatchewan Indian Federated College University of Regina

SIFC invites nominations and applications for the position of Dean of Academic Affairs - Regina campus.

SIFC is the only Indian controlled University College in the Americas and is committed to excellence in research and teaching. At present SIFC has faculties of Arts, Science, Business and Public Administration, Social Work and Education, and is expanding at a fast rate to meet increased

The new Dean will provide academic leadership for Faculty and Department Heads and continue to develop SIFC at the local, national and international levels in the university community.

The successful candidate will have academic and administrative experience in research and teaching and a sensitivity to Indian culture and issues.

The position will commence on July 1, 1989 or at a mutually agreed upon

Nominations and applications with a current resume and the names of three referees, should be forwarded by April 30, 1989 to:



Paul I. Dudgeon Vice President of Academic Affairs Saskatchewan Indian Federated College University of Regina Regina, Saskatchewan S4S 0A2

#### OUEEN'S UNIVERSITY DEPARTMENT OF BIOLOGY

OUEEN'S UNIVERSITY OF BIOLOGY
The Department of Biology at Queen's Commentary of the Department of Biology at Queen's Commentary of the Department of Biology Preference will be given to vertexate physiologists and animal Physiologist approaches be environmental or ecological questions, but researchers in all areas are encouraged to apply Coulingstons. The Supposition of the Commentary of



#### THE UNIVERSITY OF MANITOBA LIBRARIES HEAD, ELIZABETH DAFOE LIBRARY

The incumbent is responsible to the Director of Libraries for the overall operation of the Elizabeth Dafoe Library in ell its espects. This includes: personnel related duties; policy formulation and implementation; understanding the research and leaching programs of the Faculties of Arts and Human Ecology and the Schools of Nursing and Sociel Work, planning the collections and services of the unit to reflect those needs; presenting a confidential budget to Libraries Administration and monitoring expenditures; collection development; development and providing library services; contributing to the planning of physical lactilities, participaling in the development and invarious formulations; undertaking specific projects and serving on library and university committees as appropriate.

OUALIFICATIONS: A degree from en ALA accredited library school. A subject degree in Arts, Human Ecology, Nursing or Social Work, preferably at the graduate level, and/or significant experience at the professional level in a large research or academic library. Demonstrated management skills, Knowledge of ecademic library, Debilo services, automated systems and collection development are required. Personal qualifications of judgement, inflative and resourceluliness; the proven ability to work with staff and users at all levels. The successful candidate is expected to show evidence of participation in professional development and other relevant professional activities.

RANKS & SALARY RANGES: Commensurate with qualifications and experience:

\$29,031 to \$50,508 \$36,459 to \$63,432

In addition, the Unit Head position carries a slipend of \$2,768 per annum.

This position has a two-year probetionary period

FEFECTIVE DATE: April 1 1989

Librarians enjoy ecademic status and are appointed to one of four ranks: General, Assistant, Associate and Librarian, with the possibility of promotion.

Both women end men are encouraged to apply. In accordance with Canadian Immigration regulations, this ennouncement is directed to Canadian citizens end permanent residents.

Submit application, including resume, selary expectations and the nemes of three referees by April 30, 1989

Eerle C. Ferguson Director of Libreries University of Menitoba Winnipeg, Menitobe, R3T 2N2



### THE UNIVERSITY OF MANITOBA LIBRARIES HEAD, SERIALS SECTION TECHNICAL SERVICES

The Head, Serials Section reports to the Coordinator of Technical Services. Duties of the position include: coordinating, planning and supervising staff and workflow, liaising with the Heads of the Acquisitions and Cataloguing Departments, initiating, participating in and notifying other areas of policies and procedures; coordinating and evaluating serials acquisitions procedures; training new serials catalogues; serving as a resource for serials cataloguing and reference; assisting with serials cataloguing es needed; maintaining statistics of work performed and writing an annual report; keeping current with developments in serials

OUALIFICATIONS: An ALA accredited library degree. Significant professional experience with all aspects of serials librarianship at an academic or research library. Demonstrated management skills. Knowledge of academic library public services, sterhical services activities, and eutomated systems required; knowledge of collection development an assel. Personal qualifications of judgement, initiative and resourcefulness; the proven ability to work with staff and users at all levels. The successful candidate is expected to show evidence of participation in professional development and other relevant professional activities.

SALARY RANKS AND RANGES: Commensurate with qualifications and expenence:

Associate Librarian

\$29,031 to \$50,508 \$36,459 to \$63,432

In addition, this Section Head position cames a stipend of \$914 per annum.

This position has e two-year probationary period

EFFECTIVE DATE: As soon as possible

Librarians enjoy academic status and are appointed to one of four ranks: General, Assistant, Associate and Librarian, with the possibility of promotion.

Both women and men are encouraged to apply. In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents.

Submit applications including resume, salary expectations and the names of three referees by April 30, 1989 to:

Director of Libreries The University of Manitoba Winnipeg, Menitoba, R3T 2N2



#### FELLOWSHIP IN PSYCHOSOCIAL ONCOLOGY

The Department of Psychosocial Resources of the Tom Baker Cancer Centre will be offering a one-year (possibility of two years) fellowship commencing September 1989. The department has a staff of four psychologists, three social workers and two consulting psychiatrists. The Tom Baker Cancer Centre is the principal tertiary care facility serving cancer patients and their families for the Southern Alberta Region and is a teaching facility of the University of Calgary.

Candidates should possess a Ph.D. or be near completion of Doctoral studies in Clinical/Counselling Psychology and have Behavioral Medicine Research Interests. Fellows will have training opportunities in Adult, Pediatric and Consultation Liaison Services. Stipend and benefit package included.

Send inquiries and curriculum vitae to:

Dr. Barry D. Bultz Department of Psychosociai Resources TOM BAKER CANCER CENTRE 1331 - 29th Street N.W. Calgary, Alberta T2N 4N2

Preference will be given to non-smokers.

# Director, Learning Resources Centre

Ryerson, located in the heart of downtown Toronto, seeks a

Ryerson, located in the heart of downtown Toronto, seeks a Director, Learning Resources Centre.

Reporting to the Vice-Presidential level, this is a senior administrative position responsible for the operation of a centre which includes highly automated library and media library services, archives, a general-use microcomputer facility, and full media centre services. The core functions of the library include the maintenance of a collection of required basic materials for the full range of undergraduate instruction, the provision of those services which assist student academic development, the resource support for upper-year studies and research in undergraduate programs. Ryerson, a full member of the Council of Ontario Universities and the Association of Universities and Colleges of Camada, provides applied professional undergraduate degrees in 32 programs. Its Continuing Education Division offers over 45 certificate programs and more than 450 diploma, degree and professional upgrading courses on a part-time basis. Ryerson is the educational choice of 10,000 full-time and 30,000 part-time students.

The Director's background shall include: an accredited graduate degree, in library or information science, or an equivalent degree; extensive experience and knowledge of information systems and information technologies, new library technologies and media administration, proven managerial and leadership skills; and strong interpersonal and budgetary skills, all preferably obtained at a post-secondary institution.

Salary offered will be commensurate with the education and

interpersonal and budgetary skills, all preletably obtained at a pasecondary institution.

Salary offered will be commensurate with the education and experience of the successful candidate.

In accordance with Canadian Immigration requirements, this advertisement is directed to Canadian citizens and permanent residents of Canada.

Qualified candidates are asked to send a resume, along with the names of three references by April 30, 1989, indicating position title and reference #2655, to Director, Human Resources, Ryerson Polytechnical Institute, 350 Victoria Street, Toronto, Ontario M5B 2K3

AN EMPLOYMENT EQUITY EMPLOYER



# Positions available / Postes vacants

ACCOUNTING
BROCK UNIVERSITY. Applications are
invited and supplications are invited and applications of persons in this Department of
Accounting and Finance to teach third and
outly have finance courses in the 1989-90
academic year. A Ph. D. in bustness
administration or a Ph. D. partially
completed is required. In accommodation of a ph. D. partially
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day 31, 1986, a curriculum visue as well
as rames and addisessed of Wor or lenses
to Citargenson. Deput oil Administrative
Studies, Brock University, St. Catharines,
Ontaio, L25 3A1. Brock University is an
equal opportunity employer.

Omain, L2S 3A1. Brock University is an equal opportunity employer.
UNIVERSITY OF WATERLOO. Business Administration. Accounting. Applications are invited for faculty positions from those with teaching and research interests in (i) Irinancial accounting, (ii) Irinancial accounting, (iii) Irinancial accounting, (iv) Irinancial accoun Hanna, Director, School of Accountancy, University of Waterloo, Waterloo, Ontario, Ontario, Nz. 361 - In accordance with Canadian immigration i sequirements, this advertisement is directed to Canadian citizens and permanent inscidents. The availability of these positions is subject to budget approval. It is the infantion of the University of Waterloop is fill its vacances with recent PhD, gaduates appointed as Assistant order on the product of the Canadian Control of the Canadian C

ANTHROPOLOGY
THE UNIVERSITY OF LETHBRIDGE.
Faculty of Arts and Science,
Department of Anthropology. 1. Title Assistant Professor; Nine-month term appointment, leave replacement. 2. Oualitications. Ph.D., publications and feaching experience preferred. In

accordance with the Canadian Immigration Regulations, this advertisement is directed to Canadian Licitizens and perimanent residents of Canadian. The university application of Canada. The University of Canada and Canada an

ART EQUCATION

CONCORDIA UNIVERSITY. The Depertment of Alt Education and Art
haregy of Concordia University in the 1984 of the permanent residents. Please address all applications to: Search Committee,

Attention: David Pariser, Department of Art Education and Art Therapy, Concordia University, 1455 de Malsonneuve Blvd., Ouest, VA 209-1, Montreal, Ouebec, H3G

Ouest, VA 209-1, Monrosat, Cuebac, HSta 1M8.

BIOCHEMISTRY
UNIVERSITE POTTAWA, Departement de Biochimin, Professeur(r) & Adjointiey as Biochimin. Lo Département de Biochimin est à la rocherche de uois professeur(r) & Adjointiey as Celebrimin est à la rocherche de uois professeur(r) & Adjointiey as de posterio de professeur(r) & Adjointiey & Adjointiey & Adjointiey & Adjointier &

independent research program including independent research program including graduate student supervision. Employment equity is University policy. Canadian citizens and permanent residents of Canadia are invited to apply to Dr. P. Anderson, Department of Bro-chemistry, University of Ortawa, Ortawa, Ortawa, Canada KTH 8MS.

Ontaine. Canada K1H 8M5. UNIVERSITY OF ALBERTA. Research Associate. An experienced scientist with 9 P.D. in Bochemistry or related field is sought to help run a laboratory comprising 10.12 technicans, post-doctor's religious and graduate students. The laboratory is ergaped in two areas of research: 1) An examination of lipid metabolism as of function of membrane composition in lifissue cuttured cells, and 2) The use of biological macromolecules as carriers of function of membrane composition to fissue cultured cells, and 2). The use of bright control of the control of the control of properties of the control of the control of applicant will be expected to establish higher own research program in addition to assuming other responsibilities within the laboratory Salary will be com-mensurate with experience stating at a minimum of \$30,000 pages, and proposition the control of the control of minimum of \$30,000 pages, and proposition renewal subject to the continued availability of funding, effective June 1989. Apply in writing with the names of 3 references to Dr. Mark J. Poznansky, Associate Dean, Faculy of Medicine, University of Alberta, Edmonton, Alberta Cell control of Alb

citizens and permanent residents.

UNIVERSITY OF GUELPH. Department UNIVERSITY OF GUELPH. Department of Chemistry and Blochemistry. Blochemistry and Blochemistry. Leave Replacement. The Department of Chemistry and Blochemistry its seeking an Assistant Professor of Blochemistry for the period September 1, 1989 to August 31, 1990. The appointment is extendable to a

second year by mutual agreement. This position is a lerve replacement and is non tenue track. Duties will include teaching four courses in biochemistry and possibly related areas, according to the interests of the incumbent. Opportunities will be available for collaboration with one of the incumbent. Opportunities will be available for collaboration with one of the research groups in the department all applicants should possess, or expect to applicants should possess, or expect to sen, a Ph.D. depice by the starring date. Please apply for. Blyan R. Henry, Professor of Chemistry and Chair, Department of Chemistry and Chair, and addresses of three pictures and partment of teaching of industrial expenses. In accordance with Canadian immigration requirements this device to Canadian clusters and performant accident. University of Capity is considered to Canadian Chizens and performant accident. University of Capity is considered to Canadian Chizens and performant accident.

BIOLOGICAL SCIENCES
UNIVERSITY OF WINDSOR. The
Department of Biological Sciences invites applications for a tenure-track position at the Assistant Professor fewel. The successful cardidate with have a processful cardidate with have a considerable processor for the successful cardidate with have a fewel period to the successful and the succ immigration requirements priority will be given to Canadian citizens and permanent residents.

McGILL UNIVERSITY. Molecular/ Celtular Biology. A fully funded postdoctoral research postdoctor in research postdo no elopmental and characterization of one expressing cells. Individuals with perience in cellular cytotoxicity sassys are particularly encouraged to apply. Please submit resume with references to: Grey Matlashewski, Instituto of Parasitotopy, McGill University, McGolaud Coffee, 21, 111 Lakeshore Road, Sie-Anne de Bellovue, Ouebec, Canada HSX 100.

Canada HIX 100.
THE KING'S COLLEGE. Biology.
Assistant Professor Biology, or higher formule track appointment pending Board approvat. Ph.D required. Candidates should be able to teach either introductory botany or introductory zoology, and several of principles of ecology, leid hiology, plant ecology, plant mappablogy, ecophysiology, microbiology, biology of economic plants, animal population

ecology, and invellabiletes, at the undergraduate level, in Earthing load is modella and as the common and the

DETAILS DETAILS DESCRIPTION OF BRITISH COLUMBIA. Department esdeling. BECTAILY THE UNIVERSITY OF BRITISH COLUMBIA. Department of Botany. Research Associate/Technician. A position is available immediately to undersake basic seesarch in plant muston. An appropriate background in agricultural or plant physicilogy is essential and experience in hydroponic systems is background in agricultural or plant physicilogy is essential and experience in hydroponic systems is backer or the absorption and tanelocation of the major nutrient ions by greenbuser cope figure, contain and countered in the state of the description and tanelocation of the major nutrient ions by greenbuser cope figure, contain and countered in the state of the stat

BUSINESS
THE UNIVERSITY OF ALBERTA.
Faculty of Business. Applications are invited for full-time tenure-track faculty

positions from those with teaching and research interests in Accounting, Management information Systems, Finance, and Marketing. Ph.D. or equivalent required or candidate should be at the completion steps of degree. Salary supplements ensive their competitive offers are negotiable. Appointments ormally effective July 1st. Positions subject to availability of funding. Send received by 1st. Positions subject to availability of funding. Send received the send of the send o

the principle of equity in employment.

BUSINESS ADMINISTRATION
MOUNT SAINT VINCERT UVERSITY.

BUSINESS ADMINISTRATION
MOUNT SAINT VINCERT UVERSITY.

BUSINESS for the postero beginning duly 1, 1889, in the areas of management and accounting (subject to budgetary approval). The ability to feach effectively and withingness to engage in productive individual and/or group research 18 pages of the productive individual and/or group research 18 pages of the productive individual and/or group search 18 pages of the productive individual and/or group in accordance with causaline and productive individual and producti

Mount Saint Vincent University, Hallas, Mount Saint Vincent University, Hallas, NS, UERSTY COLLEGE OF CAPE BRETON, Management and Administration. Subject to budgetary approva, applications are invited for a terure track position commencing July 1, 1989. Applicants should have a Ph.D. (completed or near completed) and elevant teaching or package they are to those with expertise in the Bachelor of Business Administration popular and research. Preference will be given to those with expertise in two functional areas. All applications, accompanied by temperating the functional research. Preference will be given to those with expertise in two functional areas. All applications, accompanied by temperating the curriculum of the properties of Management and Administration. University Cellege of Cape Broton, P.O. Box 5000. Syndry, Nova Soota, BIP 6LZ. Deadher for applications are invited from candidates with qualifications in the

- April 20, 1989.

Ammiliaristation. Applications are invited from candidates with qualifications in the areas of Accounting and Industrial Relations. Rank of Assistant, Associate on Professor; rank based on qualifications and experience, preferably at the Assistant of Associate in every. Ph. D. on D. B. septiment of the Assistant of Associate level. Ph. D. on D. B. septiment of the Assistant of Associate level. Ph. D. on D. B. septiment of the Assistant of Associate level. Ph. On D. B. septiment of Associate level. Ph. On D. B. septiment of Association and Undergraduate levels. Salays will commensurate with qualifications, tracking and practical experience. Distance in the Associate Dean, Faculty of Administration, University of Regina, Regina, Saskathewan Associate Dean, Faculty of Administration, University of Regina, Regina, Saskathewan Associate Dean, Faculty of Administration, University of Regina, Regina, Saskathewan Associate Dean, Faculty of Regina, Begina, Saskathewan Associate Dean, Faculty of Regina, Facu Regina, Saskarchewan S4S 0A2. UNIVERSITY OF MANITOBA. Faculty of

Management. Applications are invited in the areas of (i) accounting, (ii) finance, and

# Advertising and censure

CAUT will not carry advertisements from censured universities. CAUT refuses ads from such universities because the Council explicitly recommends that members not take positions at universities which have been censured.

### Publicité et Censure

L'ACPU refuse les annonces des universités frappés de la censure parce que le Conseil recommende explicitement aux membres de ne pas accepter de poste dans l'une de ces univer-

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# ANATI

CAUT Insurance Trust, P.O. Box 3528, Station C, Ottawa, Canada K1Y 4G1. Administrateur de l'Assurance de l'ACPU, C.P. 3528, succursale C, Ottawa, Canada K1Y 4G1.

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Les membres de l'ACPU peuvent souscrire aux régimes suivants à prix modique:

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- 2. ASSURANCE PERSONNELLE EN CAS D'ACCIDENT (\$150,000).
- ASSURANCE-VIE POUR LA FAMILLE sur la vie du conjoint et des enfants des membres.

RÉGIME D'ASSURANCE EFFETS PROFESSIONNELS livres, ordinateurs, etc.

Please send me information outlining the CAUT Insurance Plans.	Veuillez, s'il vous plaît, me faire parvenir les renseignements complets sur les régimes d'assurance de l'ACPU.				
Name/Nom					
Address/Adresse					
City/Ville Pro	vinceCode				

(III) information systems. Rank is ozen-based on qualifications and oxperance, based on qualifications and oxperance.
Ph.D. or DBA, completed or near completion is required. Dulles include research and leaching at the under-graduate end gaduate levels. Salary is compessitive and will depend on que-lifications, asperiance and research, 1939 preferred. Application date closes when posterion is lind. Buth women and men are encouraged to apply. In accordance with Canadian immigration requirements priority will be given to guitted Canadian citizens and permanent to be sent to: Di. Li. Gould, Head, Department of Accounting and Finance, University of Manicha, Winnipez, Manichas, Rai? 222.

Manusch and ACMER UNIVERSITY.
Applications are mixed for positions in the areas of Marketing, Operations and Decision Sciences and Policy for the 1989-90 academic year. Outsitrections: PhD or ABD with teaching and research experience. Rank: Lecturer up to Full Poilessor. Salary and rank will depend on qualifications and experience. Applications are subject to budget approval. In accordance with Canadan Immigration requirements, this advertisement in accordance with Canadan Immigration requirements; this advertisement permanent research applications to. Dr. Ron Claig. Associale Dean of Eusiness, School of Business and Economics, Willfeld Laurer University, 75 University, Yavenue West, Waterfoo, Ontaio, N2.305.

Oriano, N2L 3.C.S.
CONCORDIA UNIVERSITY. The Department of Finance at Concordia University invites applications for tenure rirack and visting positions at the rank of Assistant, Associate and Full Pullessois. All areas of Finance will be considered. Teaching at undergraduate, MBA, M.S.c. and doctoral reverse. Yes young research university of the control of the con Associate and PUT Professors. All afeat of Finance with December of Technique at undergraduate, MSA, MSA, and doctoral several Very strong research or several very strong research and the professor fant. Higher ranks require demonstrated evidence of research productivity. Faculty involvement in executive development programmes and cooperative programmes with onlinear several very several productive and movester faculty. Salary productive and movester faculty. Salary conceives the productive of qualifications and experience; preferably at the Assistant or Associate tevel. Ph.D. Committee of the control of the cont

Torrance. Deen, Faculty of Business. McMaste University Amilition, Ontaro. LSS 4Ms. UnivERSITY OF NEW BRUNSWICK, FEDERICTON, Faculty of Administration invites applications in Accounting, Finance, Human Resource Management, Marketing, Management Information Systems, Organizational Theory and Business and Society, Quentifetive Methods. Ovalification for tenure track positions in all disciplines is 40 methods of the properties of the propertie

4400, Fredericton, New Brunswick, Canada, E3B 5A3.

CHEMISTRY
THE UNIVERSITY OF LETHBRIDGE.
Faculty of Arls and Science.
Department of Chemistry. 1. Title:
Assistant Professor in Analytical
Chemistry, probationary (tenure-track).
The University, primarily an undergraduate
liberal arts institution, is committed to
enter the consideration of the considera relevant experience shall be considered an asset. In accordance with the Ganadian Immigration Regulation, this can also a secondance of the secondary of the secondary of the secondary of the secondary as the secondary as the secondary as the secondary as the secondary of the se In accordance with including a current currection write, a bilet outline of research interests, and three laters of reference, should be sent to: Dr. CO. Bender, Acting Chall, Department of Chemistry, The University of Lethbidge, 4401 Linkersty Druye, Lethbidge, Alborta, T1K 3M4. 6. Effective Date: 1 July 1989. 7. Closing Date: 1 May 1989. UNIVERSITY OF NEW BRUNSWICK.

UNIVERSITY OF NEW BRUNSWICK.
Applications are invited for a approved tenure-tiack position in Organic Chemistry.
Outstanding condidates from any area of organic chemistry including bio-organic will be considered. Candidates may possess the Ph.D. degree and a solid record of chemical tessarch, and be prepared to develop a vigorous research program. The position is expected to be at the Assistant Professor level, but candidates whose scorefence and record meltits a higher Professor level, but candidates whose experience and record metils a higher rank are encouraged to apply. Persons with the required nacidamic qualifications are invited to apply. Applicants should sand a resume, an outline of proposed research, and the names of three referees to: Dr. D.G. Brewer, Chairman, Department of Chemistry, University of New Brunsweck, Bag Sorvice 458222, Frederiction, N.B., Canada E38 6E2.

CLASSICS
UNIVERSITY OF BRITISH COLUMBIA.
The Department of Classics at the University of British Columbia plans to make two temporary of visiting appointments for eight months of viveling appointments for eight months or twelve months, depending on qualifications and experience, starting September 1, 1989 Candidates should have a Ph. Jo or maximum of the control o three referees piepaled to provide a teletenee on request. Closing dale. June 1, 1989. Apply to: Head, Department of Classics, C265, 1866 Main Mail, The University of British Columbia, Vancouver, B.C., VET 1WY, Canada in accordance with Canedian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada.

priority will be given to Canadian citizens and primariant residents of Canadia. WILERID LAURIER UNIVERSITY. Applications are invited for a termite task position in the Department of Classics commencing July 1, 1985. The position will be open until tilled. The successive applicant must have a strong beginning the properties of the pro

COMPUTER SCIENCE
THE UNIVERSITY OF LETHHRIDGE.
Faculty of Aris and Science.
Department of Mathematical Sciences.
1. Title: Assistant Prolessor, probationary
(returuer tack) appointment. 2. Duailications: Ph.D. in Computer Science.
Applicants inering compilation of a Ph.D.
are also invited to apply. The University
primarily or undergladualle liberal aris
institution, is committed to excellence in
teaching and scholarship. In accordance
with the Cenadian Immigration COMPUTER SCIENCE

Regulations, this advertisement is directed to Canadian cilizens and perimenent residents of Canadia. The unbearing control of the control of Mathematical Sciences, the University Drive, Lethbridge, 4401 University Drive, Lethbridge, Alberta, T1K 3M4, Ph. 403-329-2473. 8. Effective Date: 1 July 1989. 7. Closing Date: 1 May 1989. THE UNIVERSITY OF AUCKLAND, NEW

THE UNIVERSITY OF AUCKLAND, NEW ZEALAND, Department of Computer Science. Lectureship/Semor Lectureship Computer Science. Application with a higher degree in computer Science. Application with a higher degree in subject and should have leaching and research inferests and experence in one one of computer inelworks, programming faringuages. Computer or order or or or or order or orightics, database systems, soltwaie engineering. Commencing stalay will be established within the following renges: Lecturer: SN255,000 - 545,500, with provision for extension to \$45,000; Seniol Lecturer: SN259,000 - 550,000, with provision for extension to \$63,000. Conditions of appointment and method of application are available from New Zealand. Universities and from the Appointments, University of Auckland, Applications in accordance with melhod of applications should be forwarded as soon as possible but not later than the closing date 12 May 1988. The University of Auckland an Equal Employment Operating French Proposition of the Comment of the Comment

Opportunity Employer.
UNIVERSITY OF DTTAWA, Department of Computer Science, invites applications for three tenure-track positions. A Ph.D. in Computer Science or a closely related Computer Science or a closely related discipline is required. Curient interaction discipline is required. Curient interaction intelligence, are supported to the control of cipline is required. Current research

Citawa, Ontano, K1N 6M5.

L'UNIVERSITE D'OTTAWA, departement d'Informatique, récrute présentement rois professeurles à temps plein. On demande un doctorat en hiormateurles pleins de l'entre de l'ent Oltawa, Ontano, K1N 6N5. L'UNIVERSITE D'DTTAWA, département vone curriculum vitae (ainsi que trois lettres de rétiences envoyées directement) à: Monsieur Ivan Rival. Directeur, Département d'informatique. Université d'Ottawa, Ottawa, Onlano, K1N 6NS.

Université d'Ottawa, Ortano, KIN
6NS,
UNIVERSITY DE WATERLOO. The
Department of Computer Science at the
University of Waterloo complises 40 fulltime laculty members engaged in research
and teaching activities. The Department
and twelve computer research abordanes
are housed in the new 300,00 and twelve computer
William G. Davis Computer Beach Land
Carrier of Excellence in
Inchange and add of twe-year
tensivable | Carrier of Excellence in
Information Technology that provides
though the produce of the Computer Science to the University of
Waterloo and the University of Toriento
(with participation from Queen's University)

and the University of Western Ontairo). The University of Waterloo invites the University of Waterloo invites the University of Waterloo invites the University of Waterloom on the Computer Science is required, with evidence of outstanding research accomplishment or potential in the areas of a stribical intelligence or hardware and software systems. Safary is commensurate with expension of the Computer of Computer o

Employment Capuly Employer.

THE UNIVERSITY OF THE EMPLOYER STEIN THE UNIVERSITY OF THE STEIN THE STEI

CREATIVE WRITING
UNIVERSITY OF BEINISH CDLUMBIA.
The Opentment of Creative Writing
invites applications for a lenure-liack
appointment at the Assistant of Junior
Associate Professor rank, commenced applied to the Assistant of Junior
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Associate Professor lank, commenced and television, it suched to screenwriting to the Junior
Associate Professor lank, commenced and associated a CREATIVE WRITING

DENTISTRY
UNIVERSITY OF TDRONTO. We have delayed the staning date and extended the deadline for applicetions for a position at the level of Research Associate in a the level of Research Associate in a multidesciplinary group studying connective tassue, especially bone. The successful cardidate must have a P.D. De Iraland in genetics and molecular biology, and should have at least levy years posificatorial experience in molecular biology and in culturing mormalian cells, including primary soft connective tissue and bene cells. Expense on diderantial hybridization techniques and sequencing

and a long term interest in bone call biology and diffuentiation is necessary. In the case of the case

permanent residents.

UNIVERSITY OF VICTORIA, Department of Economics. Applications are linvited for a full-time eight-month visiting appointment from 1 September 1989 (subject to budgetary approvat). Candidates should have some teaching exponence and at least all requirements of the PhD, except the these. Teaching exponence and to teach of the PhD, except the these. Teaching exponence and to teach of the PhD, except the these. Teaching exponence and at least all requirements of the PhD, except the these constitutions of the total control of the total control of the total control of the total control of the total control, montainly excounted to the total control, and the total control of the total control, and the total control of the of the bollowing: monetary economics Canadian public finance, itscal policy. Canadian public finance, itscal policy. Canadian immigration of the control of

Women are particularly encouraged to policy FISTY OF NEW BRUNSWICK. SAINT JOHN CAMPUS. The Division of Social Sciences on the Sanni John Campus invites applications for a terrule lack position in Economics at the Assistant Professor level commencing or 1 1980. Candidates should have all 1 1980. The saint of the Labour or Public Finance, but often fields will be considered. Applications, with curriculum vitale and names and addresses of three referees should be sent to Dr. Peter McGahan, Dean Of Box 5500, Sarni John, NB. E2I. 41.5 sent to Dr. Peter McGahan, Dean of Faculty, Unwersty of New Brunswick, P.O. Box 5050, Sant John, N.B. E2L 4L5 Applications will be accepted until the position is filled. In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents of

Citizens and perimentent ensurement and constant Canada.

UNIVERSITY OF WATERLOO Department of Economies. Applications are bump accepted for the position of a complete separation of the position of the constant and the constant macroeconomics, monetary theory, labour economics, and econometric theory However, outstanding candidates in other fields may also be considered. Salary fully competitive with other Canadian universities. The availability of this competitive with a bindir Celebrolist Management and Service of the Competitive with a bindir special paper of the Celebrolist Service of the Celebrolist Se

EDUCATION
CD NCORDIA UNIVERSITY. Early
Childhood Education. Applications are
invited for a leave reptacement
(commencing August 1, 1989) in Early
Childhood Education. Expense in one or
mora of the following ereas is required
cognition and learning, child development,
language arts. the disadvantaged child
and the child and the tailing.
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event is chosen to the commence of the commence
is work experience in pie-school or
mmany grades. Applications, including a is wolk experience in pre-school or primary grades. Applications, including a curticulum vitae and names of i eleleies should be sent to Professor Ellen Jacobs, Director, Early Childhood Education, Concodida University, 1455 de Marsonneuve Blvd. West. Monteal, Oubbe. H3G 1M8. In accordance with Canadian immigration requirements, protify with be given to Canadian citzens

and permanent residents.

UNIVERSITY DE NEW BRUNSWICK.
Faculty Of Education. Counselling and
Coreer Education. The Division of Educational Foundations at the Faculty of Education. UNIVERSITY of Education. UNIV. Bill.

Education. UNIV. Bill. Invites applications for a loid-time tenure track academic appointment in Counselling and Human Development at the Association of Association of the Counselling and Human Development at the Association of the Decome effection on July 1, 1989 and will be subject to budgetary approval. The tollowing qualifications: (1) a doctoral degree on an appropriate area of counselling. (2) evidence of research competence and a well edited research and apprice programs (3) the following areas: Personal/Social Family Counselling and Corrections: ii) Career Education and Career Counselling with a concentration on computer applications in Career Education and Career Counselling with a concentration on computer applications in Career Education and Career Counselling with a concentration on computer applications will be subject to the Career Counselling with a concentration on computer applications will be subject to the Career Counselling with a concentration on computer applications will be subject to the Career Counselling with a concentration on computer applications will be subject to the Career Counselling with a concentration of the counselling will be subject to the c with a learn on Career education and Counselling, and to assist in the development of innovative methods of training caleer counsellors for validus mentions in the community. The closing date to: applications is May 30, 1989. In accordence with Canadian immigration. accordence with Canadian immigliation requirements, this adventisement is directed to Canadian cilizens and permanent residents. Please submit all applications to: Dr. Donald Macliver, Chairperson, Educational Foundations Division, Faculty of Education, University of New Brunswick, Fiedericton, N.B. E38

UNIVERSITY OF SASKATCHEWAN

UNIVERSITY OF SASKATCHEWAN.
The Department of Educations for a term position in History of Education. Responsibilities in History of Education and History of Education and History of Education and History of Education and Master's degree in Education and Forgiam. The applicant should therefore foundations. Salary and rank and expensions. Ellective date of appointment is September 1, 1989. Applications, including a compilet curriculum vitice and high expensions. Ellective date of appointment is September 1, 1989. The Properties of Telephone and History of Education. University of Saskatchewan, Saskatony. UnivERSITY OF ALBERTA. The Department of Education and Education. University of Saskatchewan, Saskatony. UnivERSITY OF ALBERTA. The Department of Education and Foundations in Control of Con

wen Canadam immiglation requirements in advertisement is directed to Canadam obtains and perman the directed of Canadam obtains and perman the BRUNSWICK. Packly of Education. Division of Vocational Education. Applications are invited to this Jutilities position in Adult Education, effective June 1, 1989. The initial contract will be for a 3-year tom and is subject to budgelarly approval. The doctorate degree in an appropriate airaction of the contraction of the con

a record of program davelopment and coordination. Duties will include coordination a Community Coilega instructor. Training Program as well as toaching undergraduate and graduate to aching undergraduate and graduate toaching undergraduate and graduate toaching undergraduate and graduate toaching undergraduate and graduate and program and pr cedenals who have a uch and selevant background in education will be considered for the term appointment. Candidates must hold a teaching contiticate, have relevant teaching experience, and provide a teaching represence, and provide a teach of essaich and scholefly activities. For position 1 duties will include an appropriate combination of undergraduate and graduate teaching-student supervision, and tes earch and scholarship. For position 2 duties will include an appropriate combination of teaching, student supervision, chalarship. Some off-campus teaching as well as distance education delivery may be

Some off-campus teaching as well dislance education delivery may be included. Rank and salary will be dislance deucation delivery may be included. Rank and salary will be expensed as a salary will be expensed as the salary will be salary will be expensed as the salary will be expensed a orientation towards empirical research. This redividual must be interested in working with our seconded master working with our seconded master teacher education and at the same time establish a solid record of academic exholaship. This calls for a person of high energy and a giounding in one or more of the academic desciplines associated with reading/language arts education. The language and application of the expected to give leadership in the expected to give leadership in the expected to give leadership in the exception of the expected to give leadership in the exception of the expected to give leadership in the expected to give leadership in the expected to give leadership in the exception. The appointment wall be effective August 15, 1999 or soonest thereafter, subject to funding. Send full includes the office of the effective August 15, 1999 or soonest thereafter, subject to funding. Send full relations to Dr. Juap Trunnan, Dean of Education, Simon Frisser University, Burnaby, B.C., VSA 158. Appleations will be accepted until May 10, 1999.

**ENGINEERING** 

ENGINEERING
CONCORDA UNIVERSITY. Department of Electricel and Computer Engineering. Applications are invited for a timule term poshon which may lead to a simule track laculy position in the area of animal eritary laculy position in the area of animal eritary laculy position in the area of animal eritary laculy laculations and electromagnetic compassibility (EMC). Experience with modern computer imboeling of complex studiuss would be an asset. Preference will be given to candidate. Demonstrated evidence of effective in an outstanding candidate. Demonstrated evidence of effective eaching and communication skills eaching of communication skills eaching in the experience of a constraint of the experience including the names and addresses of three reterees, to Jeremiah F. Hayes, Dept. of Electricat and Computer Engineenig, Concordia University, 1455 de Maisonneuve W., Montreal, Ouebec H36 1MB. In accordance with Canadian immigration requirements, prority will be given to Canadian citizens and permanent residents of Canada. McMASTER UNIVERSITY. Lasers and Apptitectione. The Deperiment of Engineering Physics invets applications for a tenture track position as assistant professor. Candidates must hold a PhiD. degree and will be expected to establish a research programme in the field of lisear or electric-optics. Possible research again include opplical communications devices.

research programme in the field of lesses or electro-peris. Possible research areas include optical communications, optical signat processing, optoelectronic devices, lagear-assisted processing of materials and con-linear optics. Duties will include reaching at the undergreduate service of the processing of materials and con-linear optics. Duties will include reaching at the undergreduate service of the processing of materials and con-linear optics. Duties will include reaching at the undergreduate several to budget approval. In accordance will be subject to budget approval. In accordance will canadian imageater requirements, this advartisement is directed to Canadian includes and permanent residents from a constancing cardidres will be considered an outline of programment from the continued and continued and permanent residents and cutting and continued and Appointment is expected subject to budget approval. In conformity with current immigration policy, preference will be given to citizens or permanent residents of

io citizens or permanent residents of Canada
LAKEHEAD UNIVERSITY. Schoot of Engineering. The Department of Civil Engineering invites applications to Engineering invites applications to Ion from Civil Engineers with expertise in construction engineering. The successful andicidate will be expected to teach effectively at the undergraduate level and have the interest and ability to conduct research in construction engineering. This position is subject to hall budgetary approval. To apply, send curriculum vista and the names and addresses of three referees to Dr. Danne L. Common, Dean of Professional Studies, Lakehead University, Thurder Bay, Ontario, P7B SET. In accordance with Canadian content of the content of the content issement is directed to Canadian citizes and pumanent residents. An Equal Opportunity Employer.

Immigration regulations, this adverissement is directed to Canadian citzens
and pain ament residents. A Equal
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instance to Canadian citizens and permanent issufficient. Author Team of the control of the citizens of the ci able to bach in tom French and capulation would be a distinct advantage. Duties include leaching of undergraduate and graduate courses, research involving apparent and a control of the c

and conduct research in one or more of:

1) Water Quality or Waste Water

James Outsity or waste Waller Charles of the Community of

UNIVERSITY ÖF NEW BRUNSWICK. Department of Mechanicet Engineering. Applications are invited for two tenure track postons at the Assistant Professor level in the Department of Mechanicat Candidates must have a Phu. and be eligible for registration as Protessional Engineers in the Province of New Brunswer. These positions will involve teaching at both the undergraduate and graduate level programs and will involve the other programs and will involve the other programs and will involve

with external funding. The positions are available in two areas: (1) Applied mechanics with an emphasis on manufacturing methods, matchularly, or strength of matchine the control of the

University of New Gottswell, 1935 BAS, Canada.

UNIVERSITY OF NEW BRUNSWICK. Department of Electrical Engineering. Applications are invited for a tenure track position as Assistant Professor at the Fredenicton campus. Cardidates should be expected to the control to the contro

subject to available funding. Appointment to be effective Stipstomer I 1996 or when a soutable applicant is available. The appointment is subject to linal budget approval. A current resume and the appointment is subject to linal budget approval. A current resume and the manes of three referees should be sent to. Dean of Engineering, University of the Stipstomer of Engineering, Investigation of Engineering, Applications are invited for a tenure track Department of Civil Engineering, Applications are invited for a tenure track operation of Engineering. Applications are invited for a tenure track operation of Engineering applications are invited for a tenure track operation. As a sent of Engineering and Engineering and Engineering and Engineering and Engineering and Engineering and Stipstomer and Engineering and graduate teaching, it is expected that the person will be involved with the Gorondwater Research Group. Dispatied to register as a Professional Engineer in the New Burnswick Association of Professional Engineering the Engineer in the New Burnswick Association of Professional Engineers. Note: This is a tenure track position which is subject to budgetary approval in accordance with Canadian fimmigration requirements, this advertisement is permanent teaching. Applications including a current resume and names of three felences should be sent to Dr. Frank R. current resume and names of three referees should be sent to Dr. Frank R

colorent resume and name of in procession and the colorent resume and the colo Metallurgy, Electrochemical Engineering, Mathematical Analysis, Statistics and Control. Polymer Science and Control. Polymer Science and Forest Media and Enhanced Oil Recovery, Candidates for positions should have teaching/research inderses in one or more of these areas. Successful analysis and successful these areas and successful endeath of the PEng. qualification and some industrial acadicates with have a Ph.D. depres. The PEng. qualification of some industrial exiliance consisting of a curriculum whate, names and addresses of three referees, names and addresses of three referees. And a statement of loaching and research Interiors, should be sent to G.I. Rempol. Chairman, Department of Chemical Engineering, University of Waterloo. Chairman, Department of Chemical Engineering, University of Waterloo, accordance with Canadian Immigration requirements lihis advertisement is directed in the first instance to Canadian clitzens and permanent residents of Canada. Applications from women candidates are particularly welcome.

candidates are particularly welcome. An employment Equil Centified Engineering. The Department of Electriced Engineering. The Department of Waterloo Is seeking candidates to appointment to I require the Centified Engineering. The Department of Waterloo Is seeking candidates to appointment to I require track (aculty positions. Applications are invited in either the Centified Engineering but appointment to I require track (aculty positions. Applications are invited in either the Centified Engineering and Engineering and Engineering and Engineering and Engineering and Engineering and Engineering (aculty will be commensurate with the qualifications of University) of Waterloo to Ili sevancies with recent Ph.D. gadulates appointed as Assistant Ploatesous wherever possible. The candidate must have a doctorat diagree and a strong commitment to research and teaching. Candidates Engineering, University of Waterloo, Waterloo, Onlario, Canada, N.Z. 351, University of Waterloo, Waterloo, Onlario, Canada, N.Z. 351, University of Waterloo, Canada, Applications from women candidates are particularly with Canadian immigration requirements. Its advertisement of Electrical Canada. Applications from women candidates and Particular Canada. Applications from women candidates and Engineering, University of Waterloo, Onlario, Canada, N.Z. 351, University of Waterloo, Onlario, Canada, Applications from women candidates are of Canada, A

of three referees to: Professor N.C. Rumin, Chairman, Department of Electhical Engineering, McGill University, 3480 University, Street, Montreal, Ouebee, H3A 247. In compliance with Canadian Immigration requirements, this advertisement is diected at Canadian chitzens and permanent residents of Canada.

ENGLISH
UNIVERSITY OF SASKATCHEWAN.
The Department of English, University of
Saskatchewan, invites applications for one
to-moth! (leaver replacement) appointment, at the rank of Institutor, from 1
September 1989 through 30 June 1990.
Dubes will entail leaching these first-year
classes. In accordance with Gandalan
classes in accordance with Gandalan
tissment is directed to Canadian officers
and permanent esidents, Apply 10 pr PT.
Mittard, Chairperson, Department of
English, University of Saskatchewan,
Saskatoon, Saskatchewan, Canada STN
000.

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McMASTER UNIVERSITY. The
Department of English of McMaster
University invites applications for a oneyear replacement appointment at the University invites applications for a oneyear replacement appointment at the
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and a similar replacements are
of Amelican Liseaute. Requiements are
will include three tull under graduate
will include three tull under graduate
courses: two in U.S. literature and one in
Canadian interature. Salary is dependent
upon qualifications, the minimum salary for
an Assistant Professor in 1985/69 is 8
31,172. Applications, including uncludium
astrophysical and any and any any any any
interess, should be addressed to: Dr. M.P.
Habala, Inhamma, Department of English,
Chosto New Halt 323, McMaster
University, 1200 Main Street West,
Hamilton, Ontailo LSS 419. The
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qualifications; the minimum salary for the period September 1989 through April 1990 will be approximately \$41,500 for an Assistant Professor and \$17,500 for an Assistant Professor and \$17,500 for a Assistant Professor and \$17,500 for a Assistant Professor in chuding culticulum vitae, and letties sent by threa caudemic miteries, should be additissed of English, Cheater, New Hall 323, of English, Cheater, New Hall 323, of English, Cheater, New Hall 323, McMeater University, 1250 Main Street West, Hamilton, Oniatro L&S 419. The appointment, subject to final budgatory approval, will be affective on Suptember 1, 1959. Applications will be accepted until 1959. Applications will be accepted until 1959. Applications will be accepted until advertisement is dilected to Grandian citizans and permanent residents. McMaster offers equal emptyment opportunities to qualified male and female applicants.

applicants.
McMASTER UNIVERSITY. The
Department of English of McMaste

Juguat under the England of Kombine was contractively limited appointment at the Assistant Professor level in the aire at Ph.D. and good traching reports. Salary is dependent upon qualifications; the minimum salary for an Assistant Professor of the Institute of Institute

Ontario KSJ 788 beloio Ociober 6, 1989.

FOOD SCIENCE

ACADIA UNIVERSITY. Food Science
Depertment. Assistant or Associate
refressor. Apolications are orwitch with lase effect
tenue thack position which will laise effect
the position are to lecture to Foto Science
students, to undertake an active
programme of rigorous tesseatch, and to
lasse with the Food Industry Applications
trom a range of backgrounds such as
Food Science, Chemistry Mcrobiology,
Signlysics, and Erignessing are welcome
Houstiff experience. Preference will be
given to candidates with an interest in
Food Processing or Food Process
Engineering. Strong communication skills
are essential. In accordance with
Canadian temigration requirements,
priority will be given to Canadian citzens
and permanent residents. Acadia
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and permanent residents. Acadia
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and permanent residents. Acadia
underload processing or Food Process
and permanent residents. Acadia and permanent residents. Acadia University is an equal opportunity employer. Applications, which should include a resume, statement of leaching and research interests, and names of three referees, should be sent as soon as possible, preferably by May 1, 1989, to: 70 y. 4, tellevier, Head. Department of Food Science, Acadia University, Wolfville, Nova Scotla, Cannot 80P 1X0; Tel (902) 542-2201, Ext. 332.

FORESTRY
LAKEHEAD UNIVERSITY. A Cheir In
Forest Management and Policy has
been established as the School of Foresty
to undertake research thair meels some
key needs of the lorestry community in
Ontario. The research program is
currently being developed with input from
a wide range of interests and stake holders
in the Ontario forest sector. Topics undors
consideration include: sustainable
community development based on

lorestry; public perception of forest management and forest objectives; intensive vs. avtrainiva forestry; providents to anvironmental assessment approaches to anvironmental assessment as a second of the control of t atudies in our Centre for Application of Resource information Systems. This Issection position is effected initially for a fixed-term position is effected initially for a resource in control of the commensured with experience, at rates comparable with salaries of academic appointments at Lakahead (inversity). Competitive benefits package is offered. Applicants should submit a addresses and phone numbers of three referees by 30 April 1989 to: Or. Peter N. Oulnker, Chair, Forest Management and Policy, School of Forestry, Lakehead University, Thurder Bay, Ontrol, P75 SEI, Selphone; (207) 343 3506, Fax: Canadies firming etion regulations, this advertisement is directed to Canadian children is directed to Canadian children.

Opportuney Employe.

FRENCH
UNIVERSITY OF NEW BRUNSWICK.
SAINT JONN CAMPUS. The Civision of Numerative and Languages at the Saint John Campus of the University of the Saint Piclessor level effective July 1.

1898 (studject to budgetary approval). The successful cardidate with have a Ph. O. or equivalent and native or near-native fluency in French, teaching experiences accessful cardidate with be required to teach underig adulate courses in French Impages and finguistics at the introductory and advanced levels. Opportunity exists to some involvement in the teaching and supervision of graduate students will be accepted until the position is filled and should be addressed to Cr. Peter McCahan, Oean of Faculty. University of New Blurswick, P. O. Box Soio, Saint John, NB. Ezi. 415. In accordance with Canadian Impirisation requirements, this address and the Saint S

Canadian immigration requirements, had adventisement is directed to Canadian citizens end permanent residents. MRCRC UNIVERSITY. The Data Ball Book Brock University in the Ball Book Unive sity invites applications for one 12-month appointment in Feinch at the Senior Lacture rank, with a strong possibility of enemals, commencing July 1, 1989. The M.A. degree, proven competence in undergraduate teaching of Feinch as a second language, and native or near-native fluency in French are regived. Of particular interest are candidates with separation in one on one of the following fluence of the particular interest are candidates with respective fluences on one of the following fluences of the particular interest are candidates with a commendation sent to Professoi Ernesto Virguiti, Chalir, Oepartment of Irench, Italian and Spanish, Brock University, St. Catharines, Ontario L2S French, Italian and Spanish, Brock University, St. Catharlnes, Ontario LSS 3A1. Closing date for the receipt of epilications is May 30, 1939. In accordance with Cenadian Immigration requirements, this advertisement is directed in the first Instance to Canadian citizens and pormenent residents. Brock University is an equal opportunity

University is an equal opportunity process and personnel research of the process of the process

directed in the first instance to Canedian citizens and permenent residents. Brock University is an equal opportunity

citzens and pelimenori residents. Brock University is an equal opportunity University is an equal opportunity EROCK UNIVERSITY. The Department of French, Relian and Sparish at Brock University invites applications for a 12-month appel internet in French at the Assistant Professor rank, with a strong passibility of isensival, commencing july 1, 1989. The Ph.D. degine, native or maximute lisensity in French, and power active lisensity in French, and power internet and productive seasonth activity beyond the doctoral level is professed. Of particutar interest are candidates whose area of specialization is twentieth control French, trailian and Spanish, Block University, St. Cathadries, Ontaio LSS 341. Closing date for the receipt of pelicetions. Is May 30, 1989. In accordance with Cenadian immigration requirements, this advertisement is dilected in the first Instance to Canadian Citizens and pennanni residents. Brock University, St. and accordance with Cenadian immigration requirements, this advertisement is dilected in the first Instance to Canadian Citizens and pennanni residents. Brock

University is on equal opportunity Oniversity is on equal opportunity GROCK UNIVERSITY. The Department of French, Italien end Spanish at Brock. University invites applications for e 12-month sababatical lave repraement appointment in French at the Lecturer of Assistant Professor rank, commercing Assistant Professor rank, commercing appointment as the M.A. (for appointment as Lecturer) or the Ph.D.(flo appointment as Lecturer) or the Ph.D.(flo appointment as Assistant Professor). Proven competence in undergreduate teaching of French as a second language and native on each native to make a second language and native on each native to make a second language of the following cases: French inguistics, applied linguistics, translation, computerassisted language tearring. Send curriculum vitao, and arrange to have three letters of incommendation and to Oppartment of French, flatian and Spanish, Block University, St. Catharines, Ontario L2S AA1. Closing date for the receipt of applications is May 0, 1999. In accordance with Canadian Immigration enguirements, this advertisement is except of applications in May 0, 1999. In accordance with Canadian Immigration enguirements, this advertisement is closers and permanent residents. Block University is an equal opportunity. citizens and permanent residents. Brock University is an equal opportunity

university of Saskaronewan. The Department of Fench and Spenish at the University of Saskarbowan invites applications for a termine track position at the Assistant Pholessor rank and a terminoth limited term appointment at the Assistant foliations and a terminoth limited term appointment at the Assistant foliations and a terminoth limited term appointment at leading the Assistant foliations and a terminoth limited terminother and a terminother and the Assistant foliations and a terminother and the Assistant foliations are all the application and a displication and a detailed curriculum vitae, and should ask thier are all the application and a detailed curriculum vitae, and should ask thier are all the application and a detailed curriculum vitae, and should ask thier are all the application and a condition of the application and a condition and the application and permanent residents. Professor C. Wittin, Department of Finench and Spanish, University of Saskatchewan, Saskatono, STA ROW. AUTORA The Application and applications for one seasional leave reptacement appointment, subject to budgetary approval. The appointment would begin seach the equivalent of 3 full cutous at all teach the equivalent of 3 full cutous as at the application of the application and May 31, 1990. The appointee would be required to accept the application of the application and the appli employer.
UNIVERSITY OF SASKATCNEWAN

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university-level teaching and publications. The successful candidate must be successful candidate must be supported to the successful candidate must be supported to the successful candidate must be supported to the successful candidate succ competition is May 1, 1989. UNIVERSITE DE LA SASKATCHEWAN.

competition is May 1, 1999.
UNIVERSITE DE LA SASKATCHEWAN,
Le Département de françale et
d'espagnio de l'Université de la
SASANTONE DE LA SASKATCHEWAN,
Le Département de l'Université de la
SASANTONE DE LA SASKATCHEWAN,
Le Département de l'Université de la
son des professeurs (e) adjoint(e)
nement à la permanence et une bonne
lormation ders une session de l'adjoint de

nents. Monsieur C. Wittin, directeur, Département de Irangás et déspagnol, Université de la Saskatch-ewan, Saskaton, S7n 0W0.
UNIVERSITY OF NEW BRUNSWICK. Sessional Postion July 2 - 28, 1989, University of New Brunswick Summer immersion Programme at Tracadie, N.B. One FSL professor with qualifications and experience in the communicative (notional/functional) applicable to teach value of the communicative of the communicative control of the communicative of the communicative control of the control of the communicative control of the control of (notional/functional) approach to teach year-credit courses at advanced university levet. Exponence in immersion progue weepenses. Apoly to: Di. O.F.G. Michtyle, Chail, Opparlment of French, University of New Brunswick, P.O. 80x 4400, Frederictin, NE. ESB 623. It is accordance with Canadian immiglation requirements, this adversement is discrede to Canadian

citizens and permanent residents.
UNIVERSITE DU NOUVEAU-BRUNS-Cirche and permanent resource.

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wefcome. An Employment Equity Employer: VG PM ATERIACO. Lo UNIVERSIVO OF WATERIACO. Lo Departement de frençais de l'Université Departement de frençais de l'Université de l'Inquistique pour occuper un poste à partir du mois de septembre 1989. Le litulaire de co poste aura le rang de professaur(e) adjoint(e). Les candidate) doivent posseder une excellente méthés de la tangue française. Les intéressés au détire de l'August de

N2L 3G1. Conformément aux exigences prescrites en matière d'immigration au canado, ent evid de conceus s'adresse en protifi dux citiques canado, ent evid de conceus s'adresse en protifi dux citiques canadones et aux Walterlos cherches, dans la mesure d'u possible, à pouvroil ses postes vacants de candidat(e)s ayant récomment terminé feur Ph.D. et au rang de professaur(e) dejointre). Les candidatuses de formes aont surfout los bienvenues. Chances dembache égales pour tous.

CECGRAPHY

UNIVERSITY OF SASKATCHEWAN.
Geography Department. Applications are invited for a 10-month term postion, beginning September 1, 1989, in the area of humen geography at the rank of testruction. The candidate will be asked to class in the discovery human geography, regional geography of Canada, and course in the aleast of resources and subsent a currection of the second subsent a currection of the second subsent a currection of the second subsent a currection region of the second subsent a currection of the second subsent subsent as the second subsent GEOGRAPHY UNIVERSITY OF SASKATCHEWAN,

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CEOLOGY
UNIVERSITY OF SASKATCHEWAN.
Depertment of Geological Sciences.
Assistant Professor in Pottology/Gaochemistry (Jeim: July 1, 1889 to June 30, 1890). The Department of Geological Sciences at the University of Saskatchewan seeks applicants for the above (error position: The successful regorders of the Company of th

Canadian cluzens and permanent residents.

GEOPHYSICS

THE UNIVERSITY OF BRITISM COLUMBIA invites applications lot a piont appointment in the Department of Ceophysics and Astronomy and five Department of Electrical Engineering at the level of AssistantiJunior Associaty Professor. Applicants should have 9Ph.D. and be active in the area of geophysics will be expected to have a demonstrated ability to pursue research vigorously and to teach at the undergraduate and graduate levels in areas of interest to both Departments. Cosing date for applications is May 31, 1989. In accordance with Consing date for applications is May 31, 1989. In accordance with a consideration experiments, the companion of the consinguation regularisments, the companion of the consideration of the consider

HEALTH INFORMATION SCIENCE

THE UNIVERSITY OF VICTORIA is accepting applications for two full-time tenure track positions in the School of Health Information Science. Preleience will be given to candidates who can be appointed at the Assistant Professor level will be given to candidates who can be appointed at the Assistant Prifessoi level. The School offers a loar year Bechelor of Science degree program. It is the only program in Canada ampraine jindividuals with the knowledge and selis to design, implement and manage computus-based information systems in Neoptrels, government, and other lineath setting to the control of the control which students take alternating academic and work torms. Candidates selected will have a strong theoretical or analytical background in menagement Information systems, information seneme or computer science. Prefetores with sequent or computer of the following alease in one of another services of the following alease in one of and office automation, information systems, or software engineering. A master level qualification and a minimum of 5 years related work experience is required. Prefetorence will be given to applicants with a Ph.O. Canadison Canadian citizens and permanent residents of Canadis before assessing applications from Canadian citizens and permanent university of victoria offices equal employment opporturities to qualified male and lemale applicants, and women andle and lemale applicants, and women andle and lemale applicants, and women and the names of their relevance of their productions of the control of their productions. School of Health Information Science, University of Victoria, Sc. Debos 1700. Victoria, S.C. VMCY2.

UNIVERSITY OF ALBERTA. The Department of History, University of ALBERTA. The Department of History, University of Abenta, invites applications for a tenuestream appointment at the assistant Abenta, invites applications for a tenuestream appointment at the assistant or the second of the second of

principle of equity in employment.
UNIVERSITY OF SASKATCHEWAN. UNIVERSITY OF SASKALCIMENTAL

IN SISTOY Oppartment, University of
Sast-month sessional appointment in
Modeln European history, from 1
September 1999 to 30 June 1990. Rank,
Instructor, salary \$19,161 on current
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infovant teaching experience. Applica-tions, Including curriculum vitae and names of there referes, should be sent to: Professor J.L. Sanders. Chairmen, Department of History, Brock University, St. Cathatines, Ontario, L2S 3A1. Applications will be accepted until April 30, 1989. In accordance with Canadian Immigration requirements, this adver-tisement is directed to Canadian citizens and permanent residents. Brock University is an equal opportunity

employer.
UNIVERSITY OF NEW BRUNSWICK. UNIVERSITY OF NEW BRUNSWICK.
The Depairment of History, of the
University of New Brunswick trivities
acream position, at the level of Assistant
Professoe, in the field of Canadian history.
The position is subject to budgetary
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BROCK UNIVERSITY. The Department of French, Italian and Spanish myster at the Lecture of the Community of th employer.

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ATIN AMERICAN
STUDIES
SIMON FRASET UNIVERSITY. Latin
American Studies. A lamind from Facely
Position in Latin American Studies is available at the rank of Assistant Professor
for a one-year term staring September 1, 1989, with the possibility of renewal asplicat to bedget epopoval. The position
Latin American Studies Program. The
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The Latin American Studies Program is an
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and a studied discipline (Archaeology,
Communication, Geography, History,
Politicel Science, Sociology/Anthropology,

and Spanish). The Program sponsers a number of extra curricular scademic and cubrial activities end has a very active student society. The LAS program has institutional contacts with the University of Havana and conducts a multidesciplinary field school in Lain Amenca. Applicants must hold a Ph.D. in a related despline. Teaching generated the program has well as the program of t Canadian Immigration requirements, this advertisement is directed in the first instance to those individuals entitled to

MATHEMATICS & STATISTICS

MATHEMATICS & STATISTICS

THE UNIVERSITY OF AUCKLAND, NEW
ZEALAND. Depertment of Mathematics
S statistics. A Lectureship in Applied
and Computational Mathematics.
Applications should have a Ph.D. degine in
Mathematics Sciences. They should have
research interests in Applied Mathematics.
Scientifile Computation, Numerical
Analysis, Mathematical Physics or some
of the Computation of Mathematics
Dulies will include teaching to gladual end
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during the Mathematical Physics Appointments, University of Auckland. Applications should be forwerded as soon as possible but not later than the closing date 10 May 1989. The University of Auckland Applications should be forwerded as soon as possible but not later than the closing date 10 May 1989. The University of Auckland as Tegual Embyranni Opportunity Embyrand Control of the International Control of the International Commercing July 1, 1989. A Ph.D. (or near completion) is requiled. Preference will be given to those with a Doctorate in Statistics although cardidates with a Doctorate in Mathematics will also be considered. Applications Including a complete Curriculum Vitase and names of at least Chairman, Seasth Committee, Department of Mathematics as Statistics, University of Chairman, Seasth Committee, Department of Mathematics as Statistics, University of Paging, Regine, Saskatchwan S4S 0A2 Canada. Applications should be submitted by Apill 30, 1989. In accordance with Canadian Immigration requirements this inelance to Canadian Citizens and exemptions.

permanent residents of Canada.

UNIVERSITY DF WATERLOO. Applied permanent testedens of canada.
UNIVERSITY DE WATERLOO. Applied
Mathematics. Applications are invited for
Mathematics. Applications are invited for
Assistant. Professor level in the
Department of Applied Mathematics at the
University of Waterloo, to it a term
beginning September 1, 1989. Although
this appointment is for three years only,
the department expects to have opening
to return the state of the professor of the order of the order
to extracting research ability and a strong
order to the state of the order of the order
and three letters of recommendation
should be send to B. Forte, Chairman,
Department of Applied Mathematics,
University of Marderoo, Waterloo, Ontario

Noversity of Marderoo, Waterloo, Ontario Department of Applied Mathematice, University of Walertoe, Watertoe, Chatrio N2L 3G1. Deedline for applications: May 31, 1989 or until the position is filled. This advertisement is directed to citizens and permanent residents of Canada, Applications from women candidates are particularly welcome. An Equal Equity

particularly welcome: An equal Equip.
Employer:
UNIVERSITY OF WATERLOD.
Department of Statistics & Activersis
Science. Applications are being acceptance
of the position of Resource Acceptance
three year contractually limited position
and funded in part from the institute for
improvement and Quality and Productivity
at the University of Waterico. The
successful candidate with have an active
and productive research program in an and productive research program in an area of industrial stetistics, preferably in experimental design and/or teliability. Experimenta with consuling and fleahing in an industrial setting is e definite esset. Duties will include some underglanduate and graduate teaching in the Department, some teaching and consulting in the iIOP, and the development of a stiong independent is eseauch program. The position would be effective January 1. 1990. Send curriculom what and names Chairman, Department of Statistics and Actuaried Stene, University of Waterion, Waterloo, Ontario N21, 3G1. The closing date for applications is June 30, 1999. In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and experimental design and/or reliability

permanent residents. Interested women are especially encouraged to apply. An Equal Equity Employer. ACADIA UNIVERSITY. Department of

Equal Equily Employes.

ACADIA UNIVERSITY. Department of Methamatica. Apolications are invited for a one-year limited turn appointment, essisting professor lank, starting July 1, 1899. Candidates should have a Ph.D. in any area of mathematics or statistics. Duties include teaching at the undergladulate level and candidates are necessary of the starting professor lank, starting July 1, 1899. Candidates hould have a Ph.D. in any area of mathematics or statistics. Duties include teaching at the undergladulate level and candidates are necessary of the starting of the statistics. Professor services and candidates are necessary of the starting of the s

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(ienure-track) appointment. 2.

Oualitications: Ph.D. in Mathemetics. Applicants nearing compilation of a Ph.D. are in Invited to apply. The University, primarily an underjugational liberal aimstitution, is committed to excellence in teaching and scholarship. In accordance tracking and scholarship aspires to his individuate who have a demonstrated potential for excellence in teaching, research and scholarship. Woman end men aire encouraged to apply for this position. 3 responsibilities: The successful candidate with Sexported to teach a variety of undergraduate courses, and the position. 3 reconstitution of the department of the separate of the proposition of the department. 4. Salary (1986-99): Assistant Professor, \$32,560 minimum. 5. Applications: including a current curriculum vitace, a brief outtine of research intelessis, and three letters of reference should be sent to: Dr. JD. Hiscocks, Chair, Separatment of

research interests, and three letters or reference should be sent to: Dr. J.D. Hiscocks, Chair, Department Dr. J.D. Hiscocks, Chair, Department Dr. J.D. Hiscocks, Chair, Department of Lethbridge, A401 University of Lethbridge, A401 University of Lethbridge, A401 University Dr. Advisor Lethbridge, Dr. Advisor Lethbrid

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advertisement is directed to Canadian citizens and permanent residents. DALNOUSIE UNIVERSITY. The Otivision of Statistice, Department of Methematics, Stalletics & Computing Science. Applications are nivited for the position of Assistant Professor for a period of eight months starting September 1, 1989. Ph.D. in Statistics is required.

Duties will include graduate and undergraduate teaching and research. Please send resume and arrange to the teaching and research was confident to the confidence of the confi RDYAL ROADS MILITARY COLLEGE.

1989.

RDVAL ROADS MILITARY COLLEGE. The Department of Methematics of Royal Roads Milliary College Invites applications for the test sor level. The applications for the test sor level. The appointment would commence on 30-sley 1989 or at a mutually convenient time. Candidates should hold of PhD in Mathematics or Statistics and the preferred issearch areas would be in Applied Mathematics or Statistics. Primary dulies include lauching and research. Salary is regotable and would have applications, within should include curriculum vitas and the names and addresses of these referees, should be sent to: Dr. J.S. Mothersilli, Principal, Royal Roads Milliary College, FMO Victorie, B.C. VOSIBO (Tel: (804) 380–4517, FAX: (604) 380–4513. In accordance with Canadian Immigration of requirements, libs adventisement is requirements, this advertisement is directed in the first instance to Canadian

requirements, lihis advertisement is directed in the listri instance to Canadian chicans and permanent residents. Royal chicans and permanent residents. Royal chicans and permanent residents. Royal chicans and popularities to qualified female and male applicants to qualified female and male applicants are invited for a tenure-lack position, in Approximation Theory [File AP-2] at the Application of the Properties of the Application of the Applicat accordance with Canadian Immigration requirements, this advertisement is directed to Canadian citizens and permanent residents. Closing date for applications is April 30, 1989. Please quote file number when responding to this advertisement. The University of Alborta is committed to the principle of equity in employment.

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MEDICINE
UNIVERSITY OF TORONTO. Olvielon
Oliverior - Clinical Pharmacology. The
Department of Medicine, University of
Toronto, seeks an Individual to direct the
academic activities of its Clinical
Pharmacology Division. This division
consists of 15 GFT members who are
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undergraduate to postgraduale levels.
There are 4 readents in the postgraduale
training program. This apportment will be
at the Associate or Full Professor level
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Cheliman. Department of Medicine. 101
College Street, Bell Wing 1 + 632, Tolonto,
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College Street, Bell Wing 1 - 632, Toionto, Onlain, MSO 110 TO RONTO. Olivelian Director - Respiratory Medicine. The Department of Medicine, University of Treetor - Respiratory Medicine. The Department of Medicine, University of Medicine Division. The division consists of the College Street of the College S

directed to Canadian Cilizens and Permanent Residents of Cenada. The University of Western Ontario is an Equal

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UNIVERSITY OF OTTAWA SCHOOL OF MEDICINE. Chair of Epidemfology and Community Medicine. Applications are invited for the position of Professor and Chair of the University Department of Epidemiology and Community Medicine. The successful candidate will have the Enalt of the University pulparlimiters of the Community Medicine in exponsibility of: 1. organizing and clinecting between the exponsibility of: 1. organizing and clinecting the undergraduals teaching program in epidemiology and community medicine; 2. supervising education at the graduate level; 3. conducting a strong research program and acting as a resource person for other researching as the exportance of the communication shills, be able to provide assertive seadership and be designed of the exponent accordance with Canedian immigration requirements, priority will be given to Canadian Cilizons and permanent residents of Canadian Cilizons and permanent residents of Canada Employment equity is University policy. Applicants are requested to hexad their curriculum vistae and the names of three releves prior to May 30, 1998, to Cilies D. Hurreau, MD, Dean - School of Medicine, University of Citava, 451 Smyth Road, Ottawa, Ontaino KI14 8MS.

UNIVERSITE O'OTTAWA ECOLE OF

UNIVERSITE O'OTTAWA ECOLE OE MEDECINE. Cherre d'Epidémiologie et Médecine Sociale. L'Université d'Ottawa ouvre un concours pour le poste de l'autheur d'écher de l'autheur d'écher d'é VERSITE O'OTTAWA ECOLE OE common your control of the second of the sec

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citizens and permanent residents. UNIVERSITY OF ALBERTA: Department of Medicine. Applications are invited for a position in the Division of Pulmonary Medicine agl AssistantiAssociate Professor programment of the Pulmonary Medicine agl AssistantiAssociate Professor (Archiver and Professor and Professor and Professor (Archiver and Professor and Professor (Archiver and Professor and Professor (Archiver and Professor (Asq. 810 - \$58,954). In accordance with Canada Employment and Immigration regulations, this advertisement is addicessed to Canadian Citizens and permanent residents. Candidates should forward their references to Dr. 3.F. Paul Man, Ovision of Putmonary Medicine, Rm. 2E4.33, Watter C. Mackenzie Health Sciences Centre, University of Alberta, Edmonton, Alberta, T60 257, Canada. Closing date: May 15, 1989. The University of Alberta Committed to the principles of equily in employment.

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MICROBIOLOGY

UNIVERSITY OF GUELPH. Post
Doctoral Fellowship or Research
Associate in Virology. Postodecia al
position is evaluable to conduct research in
expression for record raiwes, see J. Gen.
Virol. 69, 1757, August 1988). Strong
background in molecular blology is
required. Experience in the area of
recombinant DIAN (cloning, sequencing,
alte-directed mulageness) se well as
commensurated with experience. The
position is renewable up to 3 years.
Please send curriculum vilee, publication
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MUSIC
ST. FRANCIS XAVIER UNIVERSITY, Applications a Will off or a tenure track, applications a long, involved for a tenure track, and the second of t UNIVERSITY OF BRITISN COLUMBIA. School of Music. Notice of possible vacancy in music theory or composition. J. Posilion: Full-time Assistant Piofessor, for 8 or 12 months. Non-renewable, though successful applicant may be a candidate if position is reedvertised next year. Subject to continued absence of e current faculty member. 2. Qualifications:

Ph.D., D.M.A., or equivalent in terms of profassional experience. Documented billiy and interest in taching music theory. An incipient carear interest in taching music theory. An incipient carear interest in taching experience at the graduale tevel will be composer. Cardidates with teaching experience at the graduale tevel will be preferred. Journal of the composer of the carear interest in the carear interest with the carear interest interest in the carear interest interest in the carear interest interest in the carear in

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NATIVE STUDIES

UNIVERSITY OF SASKATCHEWAN.
The Department of Netive Studies at the University of Saskatchewan is seeking an individual of the 1984 and the seeking seeking and the seeking seeking and the seeking seeking

NURSING
UNIVERSITY OF NEW BRUNSWICK.
Fecutty of Nursing. Position available for a Co-ordinator - Certificate in Mentel Health Nursing, to be offered through the Facuty of Nursing. Applicant should have master's preparation and argerience in Mental Health Nursing. The position will be available beginning April 1, 1989, interested applicants should write, enclosing a curriculum vitae end names control of the contro

opportunity for a nurse with a publicophylethics background, Guanilications: Decipital depice, predatably in 
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Salay Ranges: Plocissor: \$52,730-70,918; Associate Profassor: \$52,730-70,918; Associate Profassor: \$41,390\$59,534. The Univariety of Alberta is 
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1999, 10 Di. Maritynn J. Wood, Dean, 
3-119 Clinical Sciences Subidio of Aborta, 
3-119 Clinical Scienc

Faculty of Nurstng, is now taking applications for positions in the Child Health, Acute Care of the Adult, and

Mentat Health arees of nursing. Apolicants should have a Master's degree or doctoral preparation. Hank and salary will be commensurate with qualifications will be commensurete with qualifications and experience. Positions available July 1, 1989. Please aspond in writing and Include the name, address and phone number of three referees to: Prof. Penny K. Ericson, Acting Dean, Faculty of Nusing, University of New Brunswick, PO. Box 4400, Fredericton, N.B., E38 SA3. In accordance with Canadian Immigration requirements this edver-tisement is directed to Canadien citizens and permanent residents.

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NUTRITION

UNIVERSITY OF ALBERTA. Foods and Nutrition. Teaching lessarch position in Human Nutrition. Ph.D. In Nutrition or related sclence. Post-decired research them as the properties of the properties

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pentialient estudies. The University of Country in Opportunity of the principle of Country in Opportunity of Country of UNIVERSITY OF ALBERTA. The Nutrition end Matabolism Research Group invitas applications for two positions for positions for positions and entabolism end for one position entabolism end for one position exparience with ended Salay will be enumensurate with MRG rates. The incumbent will enjoy the rasearch environment offered by a multidisciplinary gloup and excellent facilities. Candidates should forward their curriculum vitae, outline of Iseaach experience and the armas of their entidences to C. M. 15 Research Group, 533 Newton Research Studies, University of Alberta, Edimental, Alberta is committed to the principle of equity in amployment.

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PATHOLOGY
McMASTER UNIVERSITY. Inflammation
Research. Modecular Virology and
timmunology Program. A postion exist
at the Assistant-Associato Prelates will be
expected to carry out original research
acaptor biology. Candidates will be
expected to carry out original research
cortaboration with a small gloup of
rasaarchers in the identification, cloning
and characterization of cytokines and
raceptor's that are involved in the
inflammatory response. Training and
experiment and evidence of independent
rasaarch capability is advantageous.
Pieference will be given to candidates with

experience in the field of the acute phase response. In accordance with Canadian immigration requirements, this advertisement is directed to Canadian orizons and permanent residents. Send C-V. and copies of relevant publications or annuscripts, along with names of releting to the control of the control of

Hamitino, Ontano L89 325.

PHARMACOLOGY
UNIVERSITY OF SHERBROOKE. Operatiment of Tharmsteedingy. Applications professor level. Apolicants should have postdoctoral experience in molecular pharmacology and be committed to establishing an excellent independent research project. Stary is committed to establishing an excellent independent research project. Stary is commensurate with qualifications and experience with qualifications and experience vittle, list of publications, a statement of lasearch interests and the names of three cleares to: Or. Plente Stois, Chaliman, Oppartment of Pharmacology, Faculty of Medicine, University of Sherbicoke, Sherbicoke, Quebec, Canada JH SN4.

Sherbrooke, Quebec, Canada JIH SN4.

PHILOSOPHY
UNIVERSITY OF NEW BRUNSWICK.
SAINT JOHN CAMPUS. The Offston of the Saint
Humantise and Languages on the Saint
Humantise and Professor level effective
July 1, 1989 (subject to budgetary
July 1, 1989 (subject to budgetary
Jupoval). The successful candidate will be an
assot. The successful candidate will be required to testen at the underguduate
level in the fields of Business Ethics
Level in the fields of Business Ethics
Level in the fields of Business Ethics
Contiemporary Morial Problems, and
should have an interest in other
contemporary lields of Philosophy.
Opportunity exists for some involvement in
the teaching and supervision of gedwate
students. Applications, including
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prevalence to Canadian citizens and permanent elecidents.

UNIVERSITY OF TORONTO. ERINDALE CAMPUS. Oppartment of Physics. Postdoctoral Fellowship or Raseauch Associateship available in Rock Magnesim. A second Fellowship may be available if funding permits. Duration: year, inanwable for a further year upon satisfactory performance. Requires Ph.D. satisfactory performance. Requires Ph.D. satisfactory performance. Requires Ph.D. satisfactory performance. Requires Ph.D. satisfactory performance requires the satisfactory performance in operating and Interfacing cryogenic systems such as SautUlb magnetometer is indispensable. Successful applicant with acry on independent research. Experience in networking and interfacing cryogenic strength of the performance of the per

THE UNIVERSITY OF LETHBRIOGE Faculty of Arts and Science.

Georetiment of Physics. 1. Title:
Assistant Piclessor; probationary (tenuerack). 2. Outlinetainers: Ph.O. piclerably
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In accordance with the Canadian.
In accordance with the Canadian of the Canadian o Faculty of Arts end Science Depertment of Physics. 1. Title

axperience and a brief outline of research interests, and strange for three letters of reference to be sent for. Dr. David A. Maylot, Chab. Department of Physics, The University of Leithbridge, 4401 University brief, Leithbridge, Adopt. University brief, Leithbridge, Adopt. The May 1989. 7. Closung Dr. Leithbridge, Abear, 11K 3494. 8. Claim 14M y 1989. 7. Closung Chair 14M y 1989. 7. Closung Chair 14M y 1989. 7. Closung Chair 14M y 1989. 19

PHYSIOTHERAPY
UNIVERSITY OF OTTAMA. Faculty of Heath Sciences. Bitingual Program in Physiotherapy. The University of Citawa has set up a Seasch Committee for the Secletion of a Director for the Baccalaureata program in physiotherapy. This bibingual program will graduate its liret suderis in June 1990. Currenty, some 45 actabilishment of seven (7) full-time protessors and part-time cinical teaches as well as excellent physical resources are available to tha program. Suitable candidates should hold a Masters or Doctoral degine in education as well as excellent physical resources are available to the program. Suitable candidates should hold a Masters or Doctoral degine in education as well as excellent physical resources are available to the program. Suitable candidates should hold a Masters or Doctoral degine in education as well as several years of Doctoral degine in education as well as active and the program of the progra

Smyth, Ottawa, Ontario KH BMS.

PLANT SCIENCE

UNIVERSITY OF ALBERTA. Applications are invited for the position of rasearch opologist. The application will be expected to lead an active rasearch program involving genetic studies, with hybridization and cytology of last expected to lead an active rasearch program involving genetic studies, with hybridization and cytology of the application of the property of the program of

POLITICAL SCIENCE
UNIVERSITY OF AGIN BRUNSWICK,
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Brunewick, P.O. Box 9050, Saint John, N.B. Ezil, Als.
CONCORDIA UNIVERSITY. The Oppartment of Political Science at Concordia University invites applications for a 10 month appointment in Canadian politics and Public Polity at the Assistant Politics of Inc., The appointment will be entered to the Complete Com curiculum vitae and three latters of elevence, should be sent to In. H habb, Chairman, Department of Political, Science, Concolid University, 1455 de Marsonneuve Blvd. W., Mtl., Que., H3G MS. The closing date for receipt of applications is April 30, 1989. In accordance with Canadian Immigration requirements, this advertisement for incredible of Canadian citizens and permanent residents. Concordial University Is an equal apportunity employer, and in accordance with its commitment to employment equity, suitably qualified women are particularly (INIVELEMENT).

emplayer, and in accordance with its commitment to emplayment equity, suitably qualified women are particularly invited to apply and a suitable position at the junior assistant protessor level in the field of American Politics and Government. Applicants should have a completed Ph.D. a commitment to effective teaching and research should have a completed Ph.D. a commitment to effective teaching and research should have a complete and experience of the protessor level in the second protessor is 33,144. A curriculum vita on the professor is 31,444. A curriculum vita on the professor is subject to confirmation of thirding. The University of Alberta is committed to the principle of equity in employment but, in accordance of the professor is subject to confirmation of thirding. The University of equity in employment but, in accordance in the professor is subject to budgetary approval, paying the professor is subject to budgetary approval, paying the professor is always the professor is alwa

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PSYCHIATRY

OUE IN'S UNIVERSITY, KINGSTON,
ONT. The Department of Psychiatry at
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accordance with Canadian immigration requirements, this advertisement tendinement to Canadian criticates and permanent residents. Starting date can be negotiated. Engulies and applications may be disected to: Frank J. Jarrett, M.J. Acting Chairman, Department of Psychaliny, Queen's University, Kingston, Omstor Kr. 1985.

PSYCHOLOGY
BROCK UNIVERSITY. The Child
Studies Program has a one-year, immed
term appointment. Candidates are
expected to have a commitment to
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uncerpladuate teaching and an active research program. Teaching duties will involve an advanced course in child involves an advanced course in child involves an advanced course in child development methods. The Child Studies Program at Brock is a large interdisciplinary program that includes faculty from the Departments of Psychology, Scoology, Education and Physical Education, and is pert of Brocks and Surface and Interest 4. Salary Chilard According to fair to experience and Surface and Surface and Interest 4. Salary Chilard According to fair to experience and Surface and Surface and Interest 4. Salary Chilard According to fair to experience and Surface an University of Prince Edward Island, 550 University Ave, Charlottetown, P.E.I. C1A 4P3. 6. Effective Date of Appointment. August 1 of September 1, 1989. 7. Closing Date for Receipt of Applications: Applications with be recoved unit position is filled. In accordance with Canadian Immigration - requirements. Intis advertasement is directed to Canadian Citizens and exemption seems. citizens and permanent residents.
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citizens and peirmanent residents. BISHOP'S UNIVERSITY. Department of Psychology. A feature site and vacancy usins at the Assistant Professor level to average and the programment of th

Caeadian immigration requirements, this advertisement is directed to Canadian dibrens and permanent residents. YORK UNIVERSITY. ATKINSON COLLEGE. Oppartment of Psychology. Applications are invited for a probationary, tenure-stream position at the Assistant Professor level and an advertisement of Psychology. Professor level and an advertisement of Psychology approval. Applicants should have a complete or near complete Pr.D. in experimental psychology; an action of the psychology and provided and psychology. Applicants should have a complete or near complete Pr.D. in experimental psychology; an action of the psychology and psychology. All psychology and psychology and psychology and psychology and psychology. All psychology and psychology and psychology and psychology and psychology and psychology. All psychology and psychology and psychology and psychology and psychology and psychology. All psychology and psychology and psychology and psychology. All psychology and psychology and psychology and psychology and psychology and psychology. All psychology and psychology and psychology and psychology and psychology and psychology. All psychology and psychology and psychology and psychology and psychology. All psychology and psychology and psychology and psychology and psychology and psychology and psychology. All psychology and ps

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WILFRIO LAURIER UNIVERSITY.

Department of Psychology. Limited

Term Position in Developmentat

Psychology. Applications aia invited for e

one or two-year appointment in the area at developmentel psychology. The successful applicant would be expected to leach undergraduate courses in developmental and educational psychology as well as at least one editional course such as introductory or methods and statetics. A person with an acrive research program is preferred. This position is avaitable July 1, 1989, end applications will be eccepted until the position is avaitable July 1, 1999, applications will be accepted until the position is filled. Applicants should send a continuitum vitae, and the names and addresses of these testees to Dr. B. Huncherger, Chair, Department of Psychology, Withrid Laurier University, Waterloo, Ontario, N2L 305. Candidates are informed that Withol Laurier University to the control the product of the produ has established a smoke-free environment. In accordance with Canadian Immigration requirements, this advertisement is directed to Canadian citizens and permanent residents of

critiens and permanent residents of Canadia.
WILFRID LAURIER UNIVERSITY.
Operatment of Psychology. Limited Term Position in Methods and Statistics. Applications are invited for a one-year appointment in the area of methods and statistics. The successful applicant would be expected to teach methods and statistics. The successful applicant would be expected to teach methods and statistics at both the basic and advanced undergraduate level, as well as teaching a graduate downs delangment of personal programs of the statistics of th has established a smoke-ties envi-ionment, in accordance with Canadian immigration requirements, this adver-beament is directed to Canadian citizens

Immigration requirements, this adversement is descend to Canadian citizens and permenent residents of Canada. UNIVERSITY OF PRINCE EOWARD SILAMO. 1. Tille of position: Applications are invited at the assistant or associate professor level to: a 3-year term position, convertible to tenure etizam. We are tooking for a candidate with A strong tooking for a candidate with A strong convertible to tenure etizam. We are tooking for a candidate with A strong combined with leaching and research interests in the acts of the second of the immigration requirements, this advertisement is directed to Canadian

cuzens and permanent residents. UNIVERSITE CONTAWA Psychologie. L'Ecole de psychologie prévolt, sous L'Ecole de psychologie prévolt, sous proposes de professeure par les prévolts de l'experiment de l'experi citizens and permanent residents.
UNIVERSITE O'OTTAWA. Psychologie essentelle. La connaissance de la région de Noo-Est de l'Orliairo est un atout. Le salate minimum de l'année en cous a salate minimum de l'année en cous est de 18,31,24. et à critiul de professiour (e) apròsée) de \$40,172. Les candidatures deviragent être soumises avant le 15 mai 1889. Adresser une lettle accompagnée d'un curriculum vitas, du nom et de l'adresser de troit de profession de 18,000 de 18,0

a one-year sabbatical replacement in Psychology. Applicants should be experienced, dedicated teachers, with experies in a variety of areas, including several of the following: Experimental

Method: Learning: Systems and Theories: Emotion, Motivation, Sansation, Perception, Qualified applicants should submit a current curriculum vitae and names of thise reference in: Di. T.A. Allaway, Academic Dean, Algoma Driversity, College, 1520 Ouens Street East, Sault Ste. Marie, Ontario, PSA 264. Algoma offers an undergraduatic centrified teaching environment, an accellent quality of the and comprehible selar engineering control of the analysis of t

Canedian citizens and pelimaneni insidents.

ST. THOMAS UNIVERSITY. The Department of Psychology St. Thomas University, has been the service of the service preference will be given to Canadian citizens and landed immigrants. Apolicants should submit a corriculum vitae, samples of scholarly work, and arrange to have of scholarly work, and alrange to have three letters of recommendation sent directly to Dr. Thomas A. Fish, Chair, Department of Psychology, St. Thomas University, Fredericton, New Brunswick, E3B 563.

Department of Pedychology, St. Thomas Livius six, Federicino, New Bunswok, E38553. White St. Pedychology, University of Pedychology, Decisions will be appointment (Ph. D. required) in the area of cognitive psychology, Decisions will be made on the basis of demonstrated research competence (as indicated by publication second), interactions with colleagues, and teaching shillip, simple preference will be given to an indirect and in attention and/or language processing, in addition, strong consideration will be given to those candidates whose reliests are compatible with existing department in esseath programmes in vesual pedeption and teading processes. Raink is at the Assistant Produces (Ped) 1966-98 salary to include curriculum vities, three lattes of recommendation, and reportios or recent publications and be sent to Dr. Peter Discon, Chart, Cognitive Search Committee, Department of Psychology, University of Alberts, Edmonton, Alberts, Canaton, Alberts, Canaton, Natra, Canaton, TGC 258, Desartine for receipt of psychology, which canadian inmigration requirements, this advertisement is requirements, this advertisement is directed to Canadian citizens and permanent residents. The University of Alberia is committed to the principle of

equity in employment.

SCIENCE EDUCATION

TRENT UHVERSITY. Applications are invited for a tenure track position in science Education at the assistant or associate professor level commencing July 1, 1989. The appointment will be made in one of Trent's science Education at the assistant or associate professor level commencing July 1, 1989. Annotates the departments. Candidates should possess a Ph.D. Responsibilities will include teaching courses in the relevant departments. Candidates should possess a Ph.D. Responsibilities will include eaching courses in the relevant department and part and expension and science education at the undergradual reorgam. Applications including a full currectum vaise and the names of three televiers who have been asked to write on the candidates behalf should be addressed to Professor Peter Barent, Associate Dean of Science, Trent University, Box 4800, Peterborough, Ontailo KSJ 6X9 by May 15, 1989. In accordance with Canadian Immigration regulations, this advertisement is decided to Canadian clusters and the second control of the control of t

SERVICE SOCIAL
UNIVERSITE LAVAL. Faculté des sciences sociales. Poste de Projesseur(e) - Ecolo de Servico Social. L'Ecolo de servico Social recherche université archére de la conference social aurorés des lorbiertes est projetice social aurorés des lorbiertes est projetice social aurorés des lorbiertes est projetice social aurorés des lorbiertes est projetices L'Ecoie de service social réchetiche unito) spécialiste dans le champ of étude du spécialiste dans le champ of étude du familles. Le ou la titulaire aura à contribue à l'ensemble des activités de l'Ecole aux frois cycles d'études. La majorité de ses liches seis conscréée à l'enseignement et à la rechetiche dans ce champ. Citées de sélections l'octorial en aspérité de ses sois decliens l'octorial en accessant dans une despirée connerse avec maistise en service social. Expérience et competence reconnues en service social aupties des individus et des familles; Aptitude et intéré pour le dévelopement et la conduite de projets de la charche des l'encepties de professes de la charche des familles en mêtre que pour la détude des familles des mêtres que pour la détude des familles des mêtres que pour la détude des conneissances: Expérience perfirence d'ansoignement en service social. L'expérience de l'ensoignement un inversaise sera un about. Rémunération et avantages sociaux selon à la convention avantages socieux selon le convention collective en vigueur à l'Université Laval.

Date d'entrée en fenction: à partir du 1et juin 1989. Dare de cloture du concouss: faire paivenir un curriculum vitae en jognant la liste de vos publications eu plus tard le 30 avril 1989. Jacques Vachon, diecteur, Ecole de service social, Faculté des sciences sociales, Université Laval, Oudebe GH 774.

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SOCIAL WORK
LAKEHEAD UHIVERSITY
Department of Social Work of Lakehead
University invites applications for the
position of Feld Co-ordinato. This well be
a probationary (tenue-wack) appointment
to commence July, 1889. Candidaries
must have an MSW degree in social work
with several years experience. Previous
experience in field supervision of social
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and salary will be commensurate with and human relation skills assential. Hank and salary will be commensurate with qualitications, and experience. Apply in qualitications and experience. Apply in wide, and the names of thise releves to: Dr. J.H.M. Whitilleld, Dean of Arts and Science, Lakehead University, Thunder Bay, Ontario, P78 SE1. In accordance with Canadian immigration regulations, this adventisement is directed to Canadian Equal Opportunity Employer.

CARLETON UNIVERSITY. Subject to budgetary approval, the School of Sociel Work, Carleton University, will be making a cardening year. The School has two concentrations: Direct Intervention as two concentrations: Direct Intervention Scorial Administration and Policy. A Bachelor of Social Monks degree is also being considered for the very near butus.

Social Administration and Policy. Bachalor of Social Work degree is also being considered for the very near future. The candidate will be expected to contribute malely to the Olisach Practices strain, but the administration of the Contribute malely to the Olisach Practices strain, but the administration of the Contribute malely to the Olisach Practices strain, but the administration of the Contribute of t

position is open to odih women and men.

SOCIOLOGY
THE KING'S COLLEGE. Sociology, or higher
Assistant Professor of Sociology, or higher
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SOIL SCIENCE
UNIVERSITY OF SASKATCHEWAN.
Soft Science. Applications are invited for a tenure track appointment at the attenue track appointment at the science of the science of Agronomy with major in Soil Cassification and genesis, and develop research programs on podogen processes in religion to land resources, managed and natural ecosystems and environmental problems. Curent salary range is \$30,711 to \$33,557 (under volvely). Sent better 51 splittaness, scademic transcripts and a curriculumate to J.W.S. Slewart, Head, Oppartment of Soil Science. University of Saskatchewan, Saskaton, Saskaton, Saskaton, Saskaton, Saskaton, Saskaton, Saskaton, Sent Settle of Specifications of the science of the saskatchewan, Canada STN DWB, (Tel. 308-986-823, Fax 306-86-861) y April 30, 1939. Effective date of appointment July 1st 1999. SOIL SCIENCE

SPANISH
UNIVERSITY OF SASKATCHEWAN.
Applications are invaled for a tenue-track
position, commencing July 1, 1989, at life
rank of Assistant Professor. Primary
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Comparative Literature component is
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teaching experience and a demonstrated commitment to issearch are essential. Candidation to issearch are essential. Candidation vide and strange for three states of relations vide and strange for three states of relationed by the second directly to: C.J. Wallin, Head, Department of Finench and Spansh, University of Saskardehwan, Saskatow, S7N DWD. Candidates will be informed once their files are complete. In accordance with Cenadian immigration requirements, this advertisement is directed to Canadien citizens and permanent residents. Closing date for applications: April 30.

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THE KING'S COLLEGE. Theology. Assistant Professor of Theology, on higher tenure track appointment. Pho. 1-required. Candidate should be able to teach introductory theology and undergradual courses in a lesst word. Because the course in a lesst word of bidding adulate courses in a lesst word of bidding adulate course in a lesst word. Because and diagrants that application of the course in comparative religion. Candidates should also be sensitive to the relemmed theology and perspective that are strongly present in the history and identify of the College. Teaching load is moderate and ressau his required. Send eiter of epociation, c.v. copies of transcripts, and there letter and the letter of the course of transcripts, and there is the course of the cou

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UHVERSTY OF GUELPH. Opertment
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Departement d'anatomile et physiologie
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galament aux hommes. avec opie du cumculum vitas incluan le nom de trois personnes auxquellés le comité pourra demander des références au Dr. André Blouin, directeur, Département d'anatomie et physiologie animales, Faculté de médecine vétérniane, Université de Montréal, C.P. 5000, Saint Hyacinthe, Qué. J2S 7C8.

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CIRICAI Virologist. A position is available
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with advanced training (preforably to the
disclorate level) in modern diagnostic
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of the major diagnostic and reterence
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end will be specifically called upon to act as a medical consultant in a lease pertaining to cfirtical visiology. Additional duties will include the teaching of residents, medical students and medical taboratory science students pius dally interaction with physicians and staft of several major hospitals and health units. Facilities are hospitals and health units. Facilities are available for an active research programme, and the candidate will be availation follone exacted as will be programmed on a candidate will be programmed on the carbon by the reason of the control of the control of the carbon by the carbon b

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Arts. Cepairment of Visual Arts.

Assistant (9 month) contractually limited

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immigration requirements, this advertisement is directed to Canadian cultzens and partmanent residents. York furiversity is implementing a policy of employment equity. Qualified women and wind to apply.

In the control of the contr in Art History is required and the ability to communicate effectively in English is essential. Preferred is a Ph.D. as well as essential. Preferred is a Ph.D. as well as essential preferred is a Ph.D. as well as many presentation of course material in exponsibilities will include the preparation and presentation of course material in grading of assignments in accordance with Departmental guidelines; office hours for individual student contact; area planning; student advising and evaluation of student applications; Faculty and/or departmental committee with. The successful time to research/scholarly/crealive/

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THE UNIVERSITY OF LET PROJECT IN THE UNIVERS on subject matter possibilities and submission requirements please contact. Urs E. Gattiker, Technology Assessment Research Unti, School of Management, The University of Lethbridge, Lethbridge, Alberta, Canada, T1K 3M4, FAX: (403) 329-2022; E-MALL: GATTIKE-WYP@

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paper available. Contact: Dr. Matur. Rahman - for Technical Info - Tel: 902-420-7724; Mary Meidull - for Registration -Tel: 902-420-7793; 1-800-565-7164; Technical University of Nova Scolia, PO. Box 1000, Halifax, Nova Scolia, B3J 2X4

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WILKIE COLLINS CENTENNIAL

COMERENCE September 29 - October

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